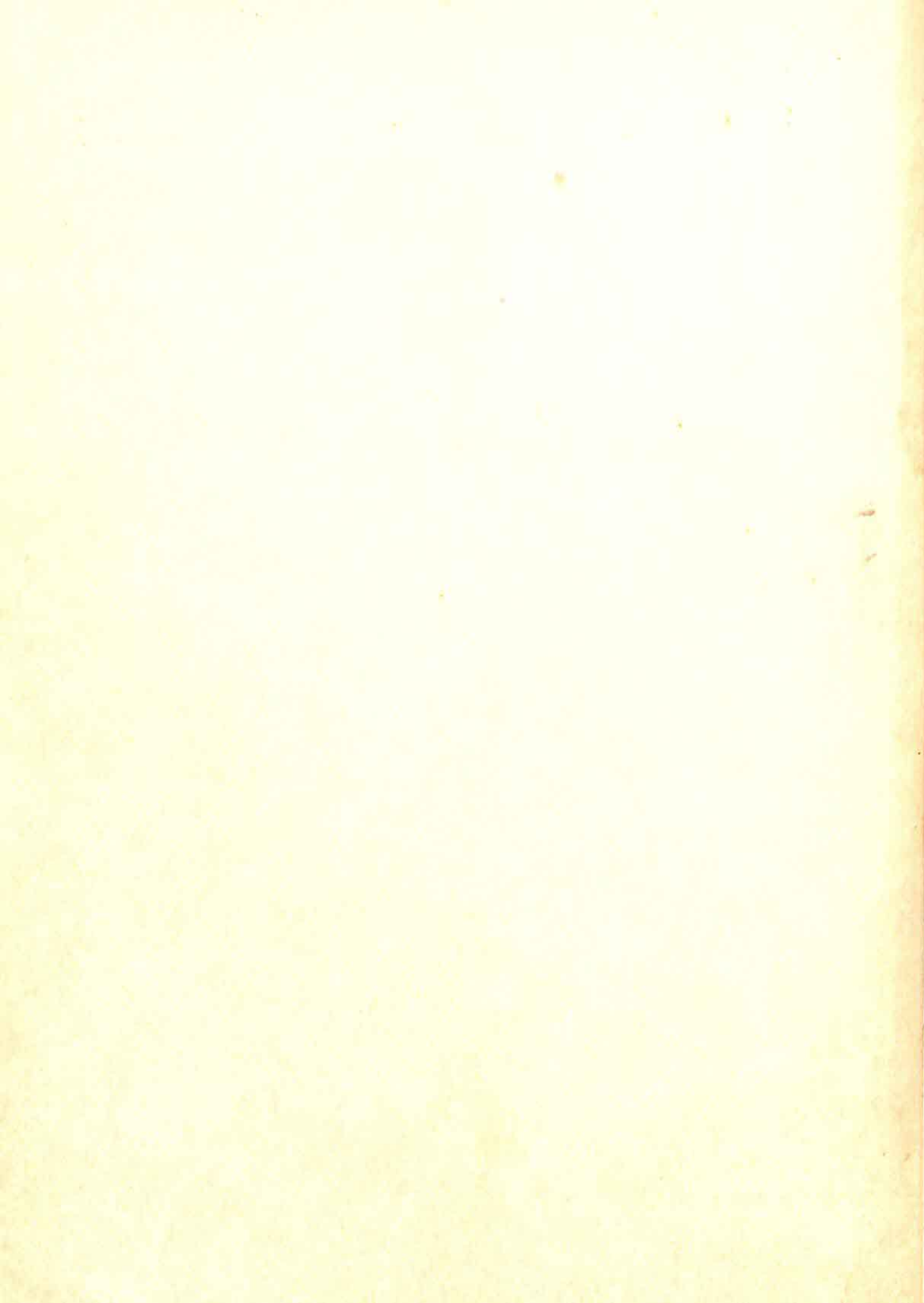


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GENERAL THEORY OF NEUROSES



GENERAL THEORY OF NEUROSES

*Twenty-Two Lectures on the Biology, Psychoanalysis
and Psychohygiene of Psychosomatic Disorders*

BY RUDOLF BRUN, M.D.

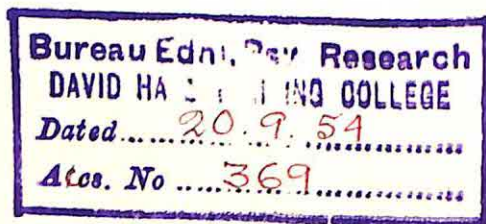
*Professor of Neurology and Neurobiology
University of Zürich*

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TRANSLATED BY BERNARD MIALL



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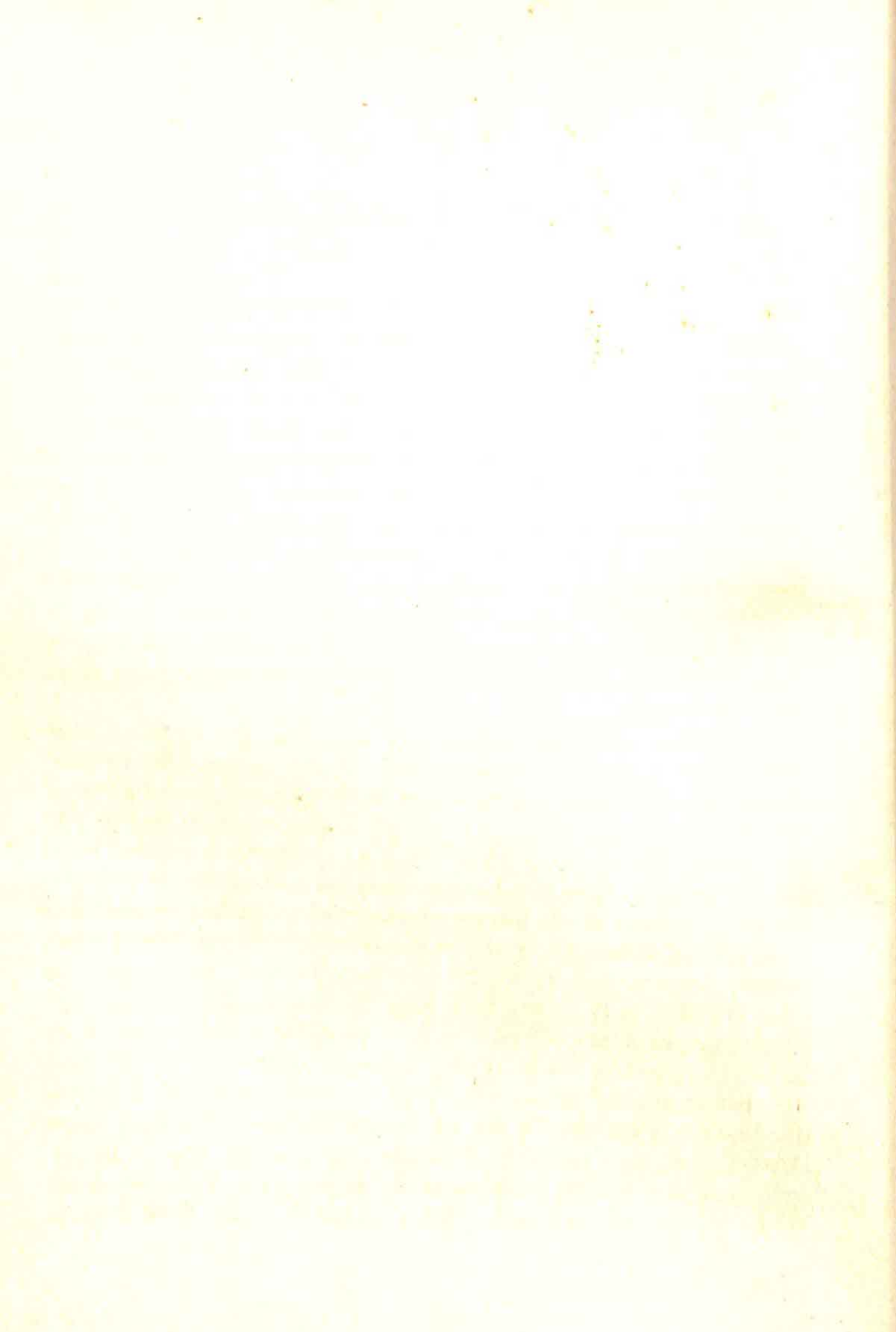
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FOREWORD BY THE EDITOR

Man is at once an individual being and a social being. From the first moment of his existence he is shaped by his environment, and by the psychic energies within him. He develops in a different manner accordingly as he is born, with the same physical and mental constitution, in Europe (for example), or in Africa, and accordingly as he is the first, or the last, or an intermediate member, of a series of brothers and sisters. Physicians, sociologists and pedagogues are constantly inquiring into the conditions under which the human being, hovering between two worlds, a pure child of Nature and a civilized man in the making, can grow up into a healthy personality and a normal member of society. Frustration and discomfiture during the period of growing up, in so far as they affect the endopsychic processes, or the person's relations to other people, may express themselves as neuroses.

In order to establish their importance to the destiny of the individual and the community, a great deal of preliminary work was necessary, some of which has now been accomplished. It seemed to us that the best way of going to work was to proceed from biology and psychology, which should always be a social as well as an individual psychology, and from this basis to examine and understand the internal and external life history of neurotic human beings and neurotic groups. When this is done with sufficient thoroughness it is not unduly difficult to co-ordinate our results with those of other sciences—for example, with those which help to elucidate the historical circumstances of a period, an epoch of civilization, as regards their liability to provoke or prevent the neuroses. In this way we may find the answer to another question: How do the neuroses affect the individual's way of life, the life of society, and the life of a period? History gives us examples which have not as yet been fully investigated and utilized in the scientific explanation of the neuroses. We have long failed to realize how trenchantly—apart from the eco-

nomie and other conscious psychic factors—unconscious dynamic forces, such as primal anxiety, neurotic anxiety, unconscious and alogical wishful images, dreams, collective fantasies and visions have shaped the destinies of individuals and the masses, and are still shaping them. The study of the neurotic has told us a great deal about the tremendous power of these tendencies, whether in healthy persons, in unusual characters, or in pathological subjects. It has revealed a second world as the foundation of the world consciously experienced. Goethe said once: "Just as in Rome, beside the Romans, there was a population of statues, so, beside this real world, there is a world of illusion, almost more powerful, in which most people are living."

Mental hygiene, that young science, is particularly interested in the problems of the neuroses. It seeks to protect the child, the adolescent, and the adult from avoidable neurotic disorders affecting their capacities for work, love, professional activity, and life. It seeks even to teach us how to evaluate the subsequent effects of unavoidable disorders. Mental hygiene proceeds from the experience that neuroses hinder the achievement of maturity or even make it impossible. Tuberculosis and the neuroses have often been compared in respect of the sum of misery which they both produce. The range of neurotic suffering seems, on the average, to be greater than that of the suffering caused by tuberculosis. Ernest Jones has said: "In the most serious bodily diseases, even under the torments of cancerous growths, or the suffocating oppression of the chest complaints, the psychic life of the patient remains at all events comparatively unaffected. Even in his worst hours he can take refuge in consoling thoughts, recollections, and reflections, and endure his misfortune, supported by the philosophy or the religiosity which he has acquired in the course of his life. The neurotic, on the other hand, is deprived of this last resource. It is precisely his spiritual life that is affected, and the instance which might have a consoling and mediating effect is inhibited in its functions." If we consider further the suffering which the neurotic inflicts on those about him it will be understood that we ought to do everything in our power to fight the neuroses, etiologically, just as we are fighting tuberculosis; but little indeed is being done in this direction. The need that something should be done is one of the reasons for the publication of the present volume.

On studying "The Theory of the Neuroses" the reader will doubtless understand why a double volume is devoted to them in the series, *Psychohygiene, Wissenschaft und Praxis* (Mental Hygiene—Theory and Practice). This volume contains, in addition to descriptions of our practical experience with neurotic patients, the medical theory illustrated in the further publications. These latter deal with the special manifestations of the same problems in various different spheres.

In Volume I, *Seelischer Gesundheitsschutz* (H. Meng) the scientific character of mental hygiene is examined, and with the help of clinical observations of physically diseased, neurotic, instinctually abnormal and normally developing human beings, the utility of mental hygiene is demonstrated—especially in education and after-education.

Volume II, *Eine Seele, die sich wiederfand* (A Soul that found Itself, C. W. Beers) is the autobiography of the founder of "Mental Hygiene." The life history of a man "who had been in Hell" exemplifies how an individual can be victorious over his spiritual sickness, and how it is possible to convert the forces of neurotic and psychotic destruction in the work of reconstruction.

Volume V, *Praxis der seelischen Hygiene* (Practice of Psychic Hygiene. H. Meng, H. Morgenthaler, O. Pfister, A. Repond, B. Stockvis, J. Wintsch, H. Zulliger) shows, with the aid of striking examples, how one can protect oneself, in the family, at school, and in the community, against psychic disorders, and above all against neurotic conflicts at various ages and in various professions.

Volume VI: *Schicksalsanalyse* (Analysis of Destiny, L. Szondi) is devoted mainly to an examination of the family trees of healthy persons, mental defectives, insane persons, epileptics, blind and deaf persons, criminals, and neurotics. The practical conclusions drawn by the author are of special significance for the general prophylaxis of disease and especially for the avoidance of the neuroses.

Volume VII: *Trieb und Kultur* (Instinct and Civilization, H. Christoffel), with reference to neurosis as the frequent precondition of enuresis, affords insight into a special sphere of the instinctual life of human beings, above all from the cultural, biological, psychological and sociological standpoints.

The double volume III and IV which is now before you, in its

second, enlarged edition, offers as an organic whole a comprehensive description of the present state of the problem of neurosis in theory and practice.

For this double volume we requested the co-operation of an author who for decades has been conducting independent and scientific researches into the problems of the brain, and at the same time, as a psychotherapist, has elucidated some of the problems of the neuroses. This is a guarantee that both the physical and psychic, and the biological and medical approaches to these problems are given full consideration. As a biologist Rudolf Brun has made essential contributions to the elucidation of the problem of the instincts; he was the first to explain the dynamics of the basic mechanism of the normal instinctive reactions, and to describe for us what happens in the case of instinctual collisions. Brun's publications concerning the processes in the interference of incompatible instincts in animals first enabled us to incorporate the results of psychoanalytic research into the consequences of neurotic conflict in the general science of biology, since it gives us biological parallels for the construction of a human psychology of need and satisfaction on a biological basis. Without the elucidation of the underlying forces of human society—for example, the phylogenetic "given" disposition to sublimation of the instincts—we should be deprived of an important basis of human education. It was Rudolf Brun's privilege to be, at the same time, as a neurologist, a pupil of the great brain specialist and biologist C. von Monakow, and as a myrmecologist a pupil of August Forel, one of the most influential pioneers of mental hygiene in Switzerland, whose preliminary studies he continued in some of his researches. Here, then, the attempt is made to combine an old psychiatric, social-psychological and pedagogic tradition with the problems of the age, in order that its further developments may be vital and productive.

Basel, February 19, 1946

Heinrich Meng

FROM THE PREFACE TO THE FIRST EDITION

The following work is the outcome of lectures which for some years have been delivered in the University of Zürich in the winter term before an audience of physicians and students—not all of whom were students of medicine. This will explain certain peculiarities of presentation, since the unequal scientific education of the listeners had to be taken into account. The lay reader will find the explanation of the most important technical expressions at the end of the volume.

The general theory of the neuroses forms the theoretical basis, and also the necessary hypothesis for all prophylactic and psychotherapeutic efforts in the sphere of the neuroses. It should provide the firm basis without which the practical treatment of the neurotic and his environment would lack scientific foundation.

Even today, as we know, the theory of the neuroses is still a subject of dispute; its problems are considered exclusively from their psychological aspect, or from a purely physiological standpoint. The representatives of both points of view are still engaged in fruitless contests. The author, on the other hand, has always taken the view that there is, in reality, no insuperable opposition between these standpoints; that both ways of regarding the subject may be fully justified, and, indeed, that they admirably supplement each other as soon as we consider the subject from a more general biological standpoint. In the following volumes, therefore, stress has been laid on the critical analysis of the numerous objections which have always been raised, especially by clinicians and physiologists, against the psychoanalytic doctrine of the neuroses: It was therefore incumbent on the author to show how the results of psychoanalytical research can be organically incorporated in the theory of the neuroses. Only within the framework of such a general biological exposition of psychoanalysis does the tremendous contribution which the theory of the neuroses owes to Sigmund Freud appear in its full scope and significance, and

only then do we see how far the whole life-work of this man, who proceeded from the standpoint of medical biology, was inspired and supported by the biological point of view.

This book, then, while giving full consideration to psychological aspects, endeavors above all to incorporate the theory of the neuroses in a general medical and biological setting and to present it in this setting. Such a synthetic representation under both points of view has hitherto been lacking. Since we primarily aimed at clarifying the psychobiological foundations of the doctrine of the neuroses the reader will understand that it was impossible to enter more closely into the philosophical and metaphysical questions which arise in considering the subjective problems of the neurotic human being. This is a frank and necessary admission to all those who will perhaps regret the absence of a discussion of such existential problems in these pages.

Zürich, March, 1942

R. Brun

PREFACE TO THE SECOND EDITION

The first edition of this work appeared in the middle of the war. Although nearly the whole German-speaking world (in so far as it was ruled by the Nazi Reich) was of course closed to it, so that it could be circulated only in Switzerland, the book was sold out in two and one-half years. This fact may be taken as evidence that it filled an urgent need, and that in his exposition of the subject the author had opened up new and fruitful lines of thought. This would seem to be confirmed by the almost wholly favorable manner in which the scientific critics received the book.

In this second edition many chapters have been expanded, and to some extent remodeled. For example, Lectures 1 and 7 have been supplemented with a comprehensive critical exposition of the physiology and pathology of the midbrain, in which particular stress is laid on the fundamental researches of W. R. Hess, while on the other hand the organic midbrain theory of the neuroses recently presented by certain authors is critically considered.

The section on the actual neuroses, and in particular, the neurasthenic syndrome, has been partly rewritten, in order to elucidate further the author's conception of the pathogenesis of these affections. There are also important additions to the chapter on heredity (Lecture 8).

Finally, in the chapter on the biology of the instincts (Lecture 9, and also part of Lecture 13), a fair account has been given of the results of the researches of some of the more recent animal psychologists, such as Lorenz, Bierens de Haan, etc. since one of the author's critics reproached him with ignoring these writers. The reproach that the important researches of other workers had been ignored could with greater justification have been addressed by the author of this book to the animal psychologists in question: For the basic biological mechanisms and the dynamics of instinctual and impulsive life were first indicated and elucidated not by these recent

authors but by myself, twenty-five years ago, on the basis of my own experimental investigations, and with due regard for the findings of psychoanalysis respecting the pathology of the instinctual life of human beings; yet my own works on the subject appear to have fallen into oblivion, since, as I have said, the more recent animal psychologists have nowhere mentioned them. Nevertheless, Uexküll, Lorenz and others have made important contributions in their works to the dynamics of the instincts, largely confirming and supplementing the results of my own researches, a fact which I hasten to acknowledge.

The third and fourth sections of this book are essentially unaltered.

I hope that this work, in its new form, will better fulfil its intended purpose, which is to give the reader a clear and full description of the present state of the theory of the neuroses.

On the publication of this new edition, I should like once more to express my best thanks to the editor, Professor Heinrich Meng, for the great pains he has taken in revising my work, and also my grateful acknowledgments to the publishers.

Zürich, February, 1946

R. Brun

PART I

GENERAL INTRODUCTION

First Lecture

DEFINITION AND CLINICAL CLASSIFICATION OF THE NEUROSES

Ladies and Gentlemen:

After the physician has listened attentively to his patient's complaints, he will subject the latter to a careful and thorough physical examination. Very often—though by no means always—he will note certain symptoms involving the organs about which the patient complains, or to which the physician's suspicions have been directed by the complaints; these symptoms per se indicate pathological changes; or in other words, the physician will try to establish organic pathology. In a comparatively large number of cases, however, the results of such an examination are negative, or there are merely signs of a functional disorder of the nervous apparatus which regulates the activities of the organs in question; that is, above all, disturbances of the vegetative nervous system. In such cases we speak, according to the circumstances, of "cardiac neurosis," "gastric neurosis," "vascular neurosis," etc.

The layman—and often enough the medical practitioner—has no real conception of the enormous frequency of such functional nervous disorders. However, a country doctor with a very large practice has assured me that he has come to the conclusion that some fifty per cent of his patients are suffering not from any organic disease, but merely from psychogenic disorders, that is, from some form of neurosis. The enormous distribution of the neuroses in all classes of the population is evinced by the statistics of the examination of recruits by army doctors. Neff, for example, reports that in sixty-three per cent of all persons unfit for military service who during the First World War, had to be discharged again from the United States Army, the cause of rejection was given as "nervous and psychic disorders" (16 per cent of all cases of unfitness!). Neff does not hesitate to declare, in view of these statistics, "that the domain of the neuroses is perhaps the most extensive in the whole of medicine." According to Consiglio, in the Italian armies at the front (that is, in human material which had already been sifted), during the First World War the "neuropsychopaths" constituted 10 to 12 per cent of all medical cases. We find even more impressive figures in respect of the war neuroses and "nervous" reactions after casualties; especially after injuries to the head. Thus, Culpin estimated the number of war

neurotics still existing in the United States of America in 1921 as at least one third of all the war pensioners, and in 1927, according to Kindred, their absolute number was still no less than 47,216. My own statistics in respect of 400 cases of head wounds (traumata of the skull and brain) gave an average percentage of 50.5 neurotics, or about one half, of all cases of men who came up for examination after the lapse of some months or years, because they claimed that they were still suffering from the aftereffects of head wounds; that is, their symptoms had at least a neurotic component, a more or less pronounced superimposed functional derangement. The proportion of pure neurotics without organic disorder was 26.5 per cent. Blum's figures are rather higher; among 80 cases of aftereffects of injuries to the skull he found 57 per cent of neuroses.

The expression "functional or neurotic superimposition" indicates that in spite of the reliable diagnosis of an organic complaint the question whether there is at the same time a neurosis—that is, a functional nervous disorder—is by no means settled. One is apt to forget that in a comparatively large proportion of cases a secondary neurosis grafts itself on to an organic injury or disorder. In the case of medical arbitration, therefore, it would be a serious mistake to refer all the subjective symptoms which a war casualty still exhibits, even after the lapse of years, to the demonstrable organic trouble; for example, to a cerebral trauma, without due regard for the general psychic structure of the case; in particular the psychic reactions to the actual experience of the casualty and its frequently far-reaching consequences. But even in the case of "genuine" organic maladies—that is, maladies not due to wounds—we find, on more careful examination, that the superimposition of secondary psychogenic disorders is far more frequent than is generally accepted. In some cases one may be surprised to find that the intensive subjective troubles which one was at first inclined to attribute entirely to organic disease disappear almost completely after the psychotherapeutic treatment and cure of the concomitant secondary neurosis, although, of course, the cardiac deficiency or emphysema or chronic pyelitis etc. persists as before. Far more frequently, however—especially in the case of insured persons—we observe the very contrary: Despite the fact that the organic symptom is completely cured, the patient does not feel well and capable of work, but obstinately continues to complain of the old troubles. Here the superimposed neurosis has taken the place of the former organic trouble.

In rarer cases, however, the contrary may occur: namely, a primary neurosis is overlaid by a secondary organic disorder. We then find,

on careful examination, that there are certain (though generally trivial) symptoms of morphological alteration in the organs which the patient declares are affected—pathological changes which in such cases represent not the cause but rather the secondary consequences of serious functional derangements of many years' standing, whose insignificance is generally quite out of proportion to the intensive subjective sufferings.¹ It will be readily understood that in the case of a man who has suffered for years from the most extreme states of anxiety, the heart, in the course of time—as the most essential “effective organ” of anxiety—is bound to be sympathetically and even organically affected; that is, it will undergo genuinely pathological changes, such as dilatation of the left ventricle, changes in the innervation which conveys stimuli to the heart, etc.—Generally speaking, it is a striking fact that the sufferer from serious organic troubles is often far better able, psychically, to endure his suffering, and accepts it far more placidly, than the so-called nervous sufferer. A typical example is afforded by multiple sclerosis, a serious disorder of the central nervous system, which is characterized, precisely in the late stages of the malady, by a predominantly cheerful mood—a euphoria which is in very striking contrast to the helpless condition of the patient. From the way in which the patient describes his sufferings, from his subjective attitude toward them, the expert physician is often able to draw valuable diagnostic conclusions.

There are, of course, serious psychoneurotic affections which are accompanied by intensive functional derangements in the central nervous system, such as the paralysis of whole limbs, anaesthesia of one half of the body, contractures, and even functional blindness, deafness, and other sensory disorders, and these cases also are not infrequently distinguished by an equable and cheerful temper, very different from the familiar type of the agitated nervous patient. It is therefore all the more possible in such cases to confuse the so-called *grande hystérie* (Charcot) with serious organic disorders of the central nervous system—for example, with the above-mentioned multiple sclerosis—and such diagnostic errors can be avoided only by a thorough neurological examination.

¹ This, as a rule, is clearly indicated by the comparison with similar cases without neurosis, and by the fact that such neurosis-free patients, despite the same or very similar pathological conditions of the organs, are practically free from troublesome symptoms.

Lastly, in yet other cases the symptoms presented by the patient point, from the beginning, to the psyche; that is, they lie predominantly or exclusively within the psychic domain. For example, the patient is suffering from agoraphobia; he cannot cross an open space, a street, etc., or board a ship or a railway train. Other patients of this category have an insuperable dread of mice, cats, fowls or other harmless animals, or they suffer from a morbid terror of bacilli. Yet others complain of a morbid passion for metaphysical speculation, or they are constantly troubled with all kinds of obsessive fears or obsessive ideas; for example, they are obsessed by the thought that some beloved relative might suddenly die. Moreover, on these grounds the patient may commit all sorts of pathological actions—so-called compulsive actions; that is, such patients may find themselves compelled, against their own better judgment, as though driven by some inexplicable power, to perform extremely peculiar and apparently meaningless ceremonial actions, which may often assume a positively grotesque character. Nevertheless, in view of their otherwise perfectly sensible behavior, one cannot by any means describe such patients as insane.

In all the above-mentioned disorders, our present diagnostic resources, either clinical or anatomical methods (dissection), do not enable us to establish any pathological organic changes worthy of mention in connection with the functional disorders presented by the patient. We must therefore conclude that there is merely a disordered function of the nervous system. These disorders we call functional nervous disorders or neuroses. The latter expression, which is now in general use, derives from the Scottish physician Cullen (1776). Less customary expressions are such descriptions as parapathy (Stekel), thymopathy (L. Frank), etc. This last expression is ambiguous in so far as it lays too exclusive an emphasis on the psychogenic nature of the disorders in question (thymos=mood); and so is the expression, psychoneuroses, which many neurologists apply to the neuroses in general. There are, as we shall presently see, neuroses—that is, purely functional nervous disorders—which are primarily not psychically determined, but somatically (in the widest sense of the word).

Among the neuroses we may include the manifold forms of the so-called neurasthenias, and the nervous states of anxiety, the so-

called anxiety neuroses; hypochondria, the protean, variable syndromes of hysteria, the countless anxiety-inhibitions or phobias, of which we have just spoken, and finally, the morbid and obsessive ideas and obsessive actions, the compulsion neuroses.

Although we have just defined the neuroses as "nervous disorders without pathological conditions of the organs," we must confess here and now that this definition is purely negative, and therefore insufficient; all the more so, as the history of medicine teaches us that with the progress of the diagnostic art, and the increase of histopathological and physiological knowledge, the number of the neuroses in the sense just defined must be gradually and progressively reduced, inasmuch as for many nervous maladies which were formerly, without hesitation, counted among the neuroses, an anatomically comprehensible organic basis has been discovered. We may cite, as examples, the genuine "St. Vitus's Dance" (*Chorea minor*), which has proved to be a coccal infection of the brain, with minute foci of inflammation in the midbrain and betweenbrain; paralysis agitans, or Parkinson's disease, which proves to be a degenerative affection of the blood vessels of the brain, with typical extrapyramidal localization in the mesencephalo-striatum; tetany, due to a deficiency of the hormone of the parathyroid glands (*Glandula parathyreoidea*); Basedow's disease, the consequence of a hyperfunctioning of the thyroid itself; and last but not least, even epilepsy, which a hundred years ago was numbered, with the affections already named, among the functional neuroses, and treated as such in the textbooks of the period! This applies also to the group of the vasomotor-trophic neuroses (Cassirer), which today are generally conceived as organic affections of the sympathetic nervous system, particularly of the main sympathetic cord² and the peripheral sympathetic ganglia—sometimes, perhaps, on the basis of constitutional or acquired endocrine derangements. For that matter, vasomotor-trophic neuroses sometimes exhibit points of close contact with hysteria. This seems to be particularly true of the "physiopathic troubles of a reflex order" (Babinski and Froment) most of which have a traumatic basis, and in which a psychogenic (hysterical) component can almost invariably be detected as accompanying (or following) the organic symptoms. This connection, however, has always been denied by Babinski, and

² German: Strang.

this eminent neurologist, referring to the group of "reflexively conditioned physiopathic disorders," has given a somewhat arbitrary definition—novel, and essentially restrictive—of hysteria; according to his views only such phenomena would be called "hysterical" as could be voluntarily imitated. Such phenomena he calls "pithiatic," and therefore re-baptizes hysteria as "pithiatism." All such phenomena, however, as do not respond to this criterion of voluntary imitability are to be eliminated forthwith from the domain of hysteria—and that of the psychoneuroses in general. On the other hand, efforts have been made in recent years to classify hysteria in general—in the original, more comprehensive sense of pathophysiological phenomena which cannot be deliberately produced—among the organic diseases of the brain (the "Hystero-Parkinsonism" of Marinesco and his colleagues).

This is not the moment for subjecting these modern theories of hysteria to an exhaustive exposition and criticism—that we shall do later (in the seventh lecture). They have been mentioned in this connection merely in order to show that nowadays a purely negative definition of the neuroses is no longer adequate, since, as we have seen, if we try to apply it in practice it is at once open to the reproach of *petitio principii*: that is, to the justifiable objection that this definition postulates the very thing that has to be demonstrated: the absence of structural changes in the nervous system. I therefore regard it as a fundamental error to exclude the diagnosis of traumatic neurosis from criticism simply on the grounds that it is still frequently employed in the course of medical arbitration. On the other hand, the diagnosis of a psychoneurosis following upon an accident, even when it is no longer possible to establish any organic consequences of the trauma, should in every case be founded, not merely on the negative result of an organic examination, but on the characteristic positive symptoms, and should be based expressly and positively on those symptoms which are peculiar to the psychoneuroses, as to any other malady. Only if we do so shall we be able to arrive at a fairly clear and comprehensive idea of the case, which will enable us to answer the questions put to us by the magistrate or the insurance company (Brun, 1938). We must therefore look for unequivocal symptoms which would enable us to diagnose a neurosis in a positive manner: that is, to distinguish it, on the grounds of certain symptoms

characteristic of and peculiar to the neuroses, from other (even from other organic) disorders. Such a criterion is provided by the observation that in the neuroses we are always dealing with primary disorders of the instinctive, impulsive, and affective life. Of course, the domains of the impulses and affects can be sympathetically affected by organic maladies; for example, in certain cardiac affections, and particularly in sclerosis of the coronary arteries, the most violent attacks of anxiety occur. But the anxiety in such cases is the secondary consequence of the organo-pathological process, while in the neuroses its occurrence is primary; that is, it appears as the original phenomenon which then sympathetically affects the heart as the dynamic organ of psychical excitation. Here the innervation process is precisely the contrary. This we shall realize on a closer analysis of hysterical phenomena: hysterical vomiting, for example, is not caused by gastric disease, or pressure on the brain; on the contrary, it occurs because the antiperistaltic mechanism is caused to function by stimuli from the domain of the impulses. The same sort of thing happens in the manifold hysterical derangements of the innervation in the region of the cerebrospinal ("animal") nervous system. A patient who suffers from paralysis in consequence of a focus of disease in the brain or spinal cord has, of course, as before the incidence of the trouble, the impulse to move the paralyzed limb, but on account of the damage to the relevant centers and nerve fibers he can no longer actualize his impulse. Conversely, in hysterical paralytics the relevant cerebrospinal apparatus is perfectly intact; the primary disorder has occurred in the impulse to make use of them in order to execute the movements.

But this hysterical derangement of the impulses must not be confused with the impulsive debility or asponaneity which is sometimes to be observed in definitely localized organic affections of the brain, and especially of the frontal lobes. The difference between such cases and cases of hysterical disorders of the impulses consists in the fact that where the forebrain is diseased the impulse as such remains normal; the trouble occurs merely in the region of the prefocal motor centers and neuronie paths which have to carry the instinctive impulses to the immediate motor-executive organs of the brain, to the so-called "motorium." Hence even the patient suffering from diseases of the forebrain, and the consequent impulsive asthenia, can

act in a normal fashion if he can succeed—for the time being—in awakening the impulse by an especially powerful instinctive excitation. This is still more apparent in the far more serious disorders of physical action which are described as apraxia, and in which not only the impulse to act, but the action itself appears to be more or less seriously disordered, mutilated, and indeed completely disintegrated, so that such a patient, as a rule, can make only disordered and amorphous movements with his apraxic extremities. Here we have a functional failure on a much more primitive level than that which may be observed in the case of lesions of the forebrain. This disorder of innervation is particularly striking when the disease is present only on one side—so that only one hand, for example, is affected; although it is not paralyzed, it has become apraxic, and does everything wrong, while the unaffected hand performs the same actions and series of movements correctly (unilateral or kinetic apraxia, Liepmann). That there is by no means a deficiency of the impulse to act, but merely a disorder affecting the *ecphoria*—that is, the inner excitation—and the evocation of the “movement-melodies” (Monakow) acquired in early youth, is evident from the very fact that the trouble is occasionally unilateral. Moreover, I was able to prove this experimentally in the case of one of my patients. This patient—a devout Catholic—was unable, at my suggestion, to make the sign of the cross. His wife exclaimed, in astonishment: “How curious! Only yesterday, in church, he crossed himself just like the others!” This same patient could not handle his knife and fork over an empty plate as though he were actually eating something. He could not “eat phantom food.” But as soon as I laid a real sausage on his plate he deftly cut up and impaled the slices on his fork and put them into his mouth. This patient suffered also from a severe “apraxia of the head muscles”; for example, he could not, when so requested, follow the doctor’s finger with his eyes as it was moved sideways; instead, he opened his mouth, bent his head backwards, etc. Then, without warning, I held a brightly illumined five-franc piece to one side of the patient’s field of vision: He immediately turned his eyes toward this pleasing object. In other words: In this apraxic patient the same complicated actions which he was unable to perform before his phantom meal, or at my request, etc., were performed in a normal manner as soon as they were unshackled by a mutual impulse, arising spontaneously

in a situation characterized by natural qualities of mood and affect (R. Brun, 1922).

In hysterical paralysis, contracture, anesthesia, etc., on the contrary (it should once more be emphasized) we are dealing with a disorder of the "impulsive center" itself—that is, with a primary disorder of the operative psyche (in Roux' sense of the term).

As soon as this affection of the impulsive centers is relieved (for example, by psychotherapy), the patient finds immediately that the intact apparatus is again at his disposal. From this circumstance we can deduce a further criterion of differential diagnosis: a criterion which is first made evident in the course of the therapy, and more especially by its success or its ineffectiveness—that is, *ex juventibus*: Neurotic disorders are on principle reversible: that is, they are susceptible of a complete and under some circumstances even an instantaneous cure, just because in these disorders the nervous apparatus itself remains structurally intact, and is ready at any moment to resume its normal functioning, as soon as the normal innervation current is once more flowing; just as an incandescent electric bulb lights up when the current is switched on. On the other hand, in the case of organic affections of the brain the restitution is always incomplete; even in the most favorable instance the neurologist will be able to detect, years after the accident, residues of the structural damage inflicted; that is, the reflexes will not be quite normal, or there will be organo-psychic disorders.

Inasmuch as we now include the neuroses in the great pathological group of the primary disorders of the instinctive life, or the hormopathies,³ as I have called them, we are at once confronted with the fact that the instinctive life may suffer a primary derangement as the result of interference from many different directions—but above all, from the organic side, by injury to the organs by which the impulse is released, or by which its "mechanism" is kept in operation. These organs are the endocrine glands and certain areas in the brain, or the brain stem.

A. The organic hormopathies can be further divided into three groups: the dysglandular, the constitutionally endogenous, and the cerebral (betweenbrain) hormopathies. Since we are here considering

³ After the Greek word *horme* = instinct, impulse.

the functional hormopathies or neuroses, we cannot enter into a closer consideration of these organic forms. However, here are at all events, the most important syndromes of the organic affections of the impulses.⁴ On the other hand, in this connection some reference must be made to the recent discoveries relating to the functions of the diencephalon.

1. *The dysglandular organic hormopathies:* In morbid affection of the various endocrine glands, either the hormone secretion ceases to flow, or—in morbid hypertrophies of glands—it is discharged into the blood-stream in excessive quantities. In both cases more or less serious derangements of the instinctive life may result.

a) Testicles: Castration in early childhood results, as is well known, in eunuchism; there is no development of the secondary sexual characters, or of the sexual instinct, with its manifold psychic irradiations. On the other hand, the defective development of the testicles results either in eunuchoidism, or in a state of arrested somatic and psychic development, with sexual and psychic infantilism. All these cases are due predominantly, if not exclusively, to the absence of internal secretion of the so-called interstitial or "puberty glands."

b) When the frontal lobe of the pituitary gland (*hypophysis cerebri*) is destroyed by tumors in early childhood, we observe regularly—in the course of the ensuing *dystrophia adiposogenitalis*, or Fröhlich's disease—a secondary hypogenitalism with correlative non-appearance of psychosexual maturity, i.e., of puberty. On the other hand, we know that the hyperfunctioning of the frontal lobe of the *hypophysis* results in the syndrome of acromegaly.

c) Conversely, if the pineal gland (*glandula pinealis*) is destroyed by tumors in early childhood we will observe a strikingly precocious sexual maturity (*pubertas praecox*). Thus, the hormone in the pineal gland seems to exert a restraining influence on sexual development. This would also follow from the fact that the pineal gland, shortly before puberty, usually undergoes an extensive physiological involution.

d) The destruction of the adrenal cortex (generally as the result of tuberculous processes) is accompanied by the development of Addison's disease or the adynamic symptom-complex which, at least in the earlier stages, exhibits a considerable similarity to a severe neurasthenia. On the other hand, the hypersecretion of the hormone of the adrenal cortex (as the consequence of adenoma) results, if the adenoma develops in childhood, in symptoms resembling those which accompany the premature failure of the pineal hormone, namely, a decided hyperdynamia ("enfants hercules") and precocious sexual maturity. If such tumors develop in women in middle life we observe, for a time, the peculiar syndrome of suprarenal virilism, i.e., a somatic and psychic masculinity.

e) The hyperfunctioning of the thyroid gland gives rise, as is well known, to the distressing syndrome of Basedow's disease. The persistent hypersecretion of the thyroidal hormone, thyroxin, by stimulating the adrenal glands (the chromaffin system) results in the hypersensibility of the sympathetic system, with clinical

⁴ Cf. the colored plate relating to the Fourth Lecture.

manifestations resembling those which we find in many of the neuroses—for example, in anxiety-neurosis—but also in certain forms of neurasthenia.

f) Lastly, according to von Monakow, the plexus chorioidei of the cerebral ventricles, or the various elements of the so-called ecto-mesodermal barrier, or "neuroglial screen" (Achucarro), in addition to their principal task of secreting and passing fluid and their function as protective membranes, have also an endocrine significance, at least for the elements of the brain itself. So much at all events is certain, that if the epithelium of the plexus is diseased or destroyed, serious psychotic disorders make their appearance, especially in the affective domain—that is, in the domain of the instinctive life—while, in severe chronic psychoses and also in cases of acute and fatal poisoning, especially in carbon monoxide poisoning, very marked pathological changes may always be detected in the region of the plexus chorioideae and the "neuroglial screen." (Monakow, Kitabayashi, Allende-Navarro et. al.)

From the above survey it will be seen that the various endocrine glands influence one another reciprocally, so that any failure or hypersecretion of the hormone of a ductless gland always produces repercussions on the activities of certain other endocrine glands. In this way pluriglandular disorders arise whose genesis and whose clinical pictures are extremely complicated. Moreover, the influence of the brain on the activity of the endocrine glands (which will presently be discussed) has to be taken into account so that in many cases it is impossible to decide whether the organic hormopathy under consideration was primarily caused by this or that endocrine derangement, or whether the endocrine disorder itself was not of a secondary nature, being caused by primary affection of the brain, or even of the hormopsyche.

II. *The constitutional-endogenous hormopathies* comprise, essentially, the endogenous psychoses (schizophrenia and cyclothymia), and the grave innate psychopathies. In contrast to the other groups of organic disorders of the instincts, here neither endocrine factors nor severe lesions of the cerebral centers, nor diffuse cellular troubles play the primary and decisive etiological role, but an innate and usually inherited anomalous condition of the chromosomes—that is, the genetic factor.

III. *Organic cerebral hormopathies.* We know today that the centers of the vegetative functions are in the diencephalon, and indeed in the medial (ventricular) ganglionic masses of the optic thalamus (the gray matter of the third ventricle) and of the hypothalamus. In this region of the brain we also find the regulating centers of all vegetative functions. In addition, the central neuronic paths from the sense organs and the sensory nerves of the body end in the adjacent and lateral nuclear regions, substantiating the assumption that in the diencephalon there is a multiple arc connection between the sensible excitations of the cerebrospinal (animal) nerve system and the vegetative centers.

The pioneer researches of the Viennese psychologists Karplus and Kreidl (1909-18) first demonstrated that the cellular substance of the regio subthalamica and the gray matter of sylvius are the superordinate centers of the sympathetic system. In 1931, W. R. Hess demonstrated the existence of a "sleep center" in the diencephalon (though its existence was suspected and foretold by Mauthner in 1890, on the basis of clinical observation). Hess, by the unipolar electrical stimulation of a narrowly circumscribed region on the wall of the third ventricle and of the aqueductus Sylvii—that is, in the hindmost portion of the regio sub-

thalamica—was able to evoke, in cats, an immediate cessation of general activity, so that within a minute or so the animal fell asleep. In this case the process of falling asleep is completely "natural." Even animals which immediately before the current was applied were still angrily spitting, now became suddenly gentle, crouched down, rolled themselves up, began to purr, and gradually fell asleep. In short, this artificially induced "electric" sleep showed all the characteristics of natural physiological sleep; even to the extent that the animal could at any time be awakened by sufficiently strong external stimuli. Continuing this line of research, W. R. Hess began systematically to test the medial portions of the diencephalon and the regio subthalamica for further visceral nerve-centers, and did in fact discover a number of other loci from which perfectly definite visceral-nervous effects could be obtained, such as sudden alterations of the blood-pressure, inhibition of respiration to the point of apnoea, or the converse, i.e. forcible breathing, contraction or expansion of the pupils, activation or inhibition of the mobility of the stomach or bowel, and finally, evacuation of the bladder and lower bowel. All these effects of stimulation occur infallibly and as often as required, whenever the relevant points are stimulated. A survey of the experiments in question has been published recently by Marcel Monnier, who collaborated with Hess.

Particularly instructive, and of considerable importance as regards the problem of the instincts, were the experiments which induced the evacuation of the bowel. Here, as in the case of experimental sleep induced by stimulating the sleep-center, it appeared once more that the act in question (defecation) did not result suddenly, convulsively, or in a disorderly and excited fashion, but only after adequate preparation, such as the assumption of the bodily posture characteristic of the action, and with the whole series of characteristic movements which are peculiar to this instinctive action. The same remarks apply to other effects which Hess was able to induce by stimulating other parts of the diencephalon; such as arching the back, spitting, leaping, and actual aggression; and, on the other hand, a comfortable purring, the attentive pricking of the ears, and finally, the instinctive act of eating—and of attempting to eat even uneatable substances, such as wood—was involuntarily performed. According to Hess, even the instinctive direction of the attention and the preliminary turning of the head, and finally the whole body, toward a particular object seems to be localized in (or rather, can be actuated from) a perfectly definite locus of the diencephalon, for after eliminating this "center" by electro-coagulation of the point of stimulation in question the animal was no longer able to turn round towards the opposite side and an attempt to do so ended in falling over or spinning round and round.

Even more remarkable is the following observation: if an animal so treated is presented with a desirable object within the field of vision on the side toward which it could no longer turn, it no longer appeared to notice the object, so that one can actually speak of a unilateral "diencephalon psychic blindness."

These interesting experiments in stimulation provided the first experimental proof that a series of distinct instinctive actions are localized in the diencephalon, confirming the doctrine expounded some decades earlier by August Forel, that the genuinely instinctive actions depend on inherited automatisms which are structurally prefigured in the nervous system of the animal under consideration.

Preparing a series of sections, M. Minkowski subsequently succeeded in making a detailed anatomical examination of the brains of the cats on which Hess had operated. It was thereby established—as was to be expected—that the instinctive actions which Hess aimed at producing were not dependent on an excitation of the ganglionic cells of the diencephalon, but on the stimulation of definite bundles of fibers which merely run through the hypothalamus. In fact, the nerves which are essentially in question are the neuron paths descending from the cortex, which reach the diencephalon mainly through the tendrils of the lenticular nuclei and above the frontal irradiation of the red nucleus.

On the basis of the pioneer researches of W. R. Hess it is often stated that "the instinctive life has its seat in the diencephalon." However, serious objections against such formulation may be made on the basis of the data just cited: In the first place, it must be emphasized that we cannot speak of any localization of the instincts themselves in the diencephalon. For in the orderly actions which Hess was able to induce by the electrical stimulation of sharply circumscribed points, the instincts themselves were not in question, but merely the release of a few extremely primitive instinctive actions, corresponding with what Hess rightly assumed to be "structures directed toward functional purposes." And even these instinctive actions, according to Minkowski, did not have their "centers," in the sense of special cellular nuclei, in the medial sections of the diencephalon, which would bring about the integration of the motor mechanisms concerned; rather, the results of stimulation were due to the excitation of neuron paths proceeding from the cortex. Normally, the impulse evoking an instinctive action proceeds either from the periphery (for example, defecation), or from the cortex, and especially from the forebrain. Ceni, for example, has demonstrated that in mammals after extirpation of the forebrain the maternal instinct is entirely absent; a female on whom this operation has been performed no longer cares for her young, and even manifests hostility toward them, driving them away and refusing to suckle them, etc. We see from this that the instincts or impulses cannot be localized in circumscribed "centers," but that the relevant impulses and the constituent functional components obviously spread over wide sections of the central nervous system in the form of extensive arcs of excitation.

On the other hand, the affective mood which is the precondition of the release on an instinctive action is largely, if not entirely, dependent on the diencephalon. Today we have good grounds to assume that the diencephalon—as the seat of the nerve centers appertaining to the vegetative functions—acts like a sort of rheostat in respect of the cortical activity. In accordance with the metabolic changes in the vegetative centers of the diencephalon (Georgi) we find that these centers influence the activity of the cerebrum in different ways. These influences may have a damping or an amplifying effect. Thus, in a certain sense the cerebrum is actually subservient to the diencephalon. This influence appears to extend to the affectivity, in particular, giving rise to what we describe as "mood." Thus, the instinctive impulses released in the cerebrum by way of the senses and the sensory regions are sometimes facilitated, sometimes completely suppressed, according to the "mood" of the diencephalon. That hormonal influences are chiefly responsible is obvious. For example, the stag reacts to the hind with the most violent sexual desire only during rutting season, and in the intervals does not even "recognize" her as a female; this is obviously

due to the fact that his diencephalon—having been flooded with sexual hormones—is sexually attuned, and communicates its mood to the cerebrum only during the rutting season. But all other fundamental activities of the cortex, such as the general readiness to react and the promptness of reaction of the apparatus of perception and association, the primary intensity of attention, the perceptive faculty—in short, the “psychic elasticity”—are also largely influenced by the relevant processes in the diencephalon. It is therefore understandable that in grave and diffuse affections of the diencephalon (inflammatory processes, but also traumatic foci) the above-mentioned fundamental activities of the cortex may be so prejudiced that peculiar forms of organo-psychical disorders may result. In this sense, indeed, we are justified in speaking of a positive “diencephalon dementia.” Further, diffuse affections of the diencephalon—for example, encephalitis lethargica—may, as we have seen, result in an extensive disintegration of those instinctive actions which cannot proceed in an orderly fashion without the co-operation of the above-mentioned arcs of excitation from the white matter of the brain. In this way symptoms arise which can easily be traced to their origin; for example, irresistible somnolence (lethargy), or even sudden fits of sleep (narcolepsy)—but in the later stages of this affection there is generally severe insomnia, or a reversal of the ordinary rhythm of sleep; but under certain circumstances there may even be a complete cessation of the urge to defecate; that is, a central form of constipation on which medicines have very little effect.

On the other hand, encephalitic foci in the diencephalon and the adjacent regions of the white matter may be accompanied by disintegration, or—in consequence of the uninhibited activity of certain components of the nervous mechanism—by a fitful and convulsive permanent excitation of individual dynamic components of instinctive actions. We then find constituent components of the mechanism of aggression, such as stamping, twisting, increasing tremor, the most primitive forms of “attacks of raving madness,” hyperkinetic and spasmodic fixations of posture (spasmodic torsion, torticollis), and components of the sexual act, etc. In short, we have the various syndromes of the so-called hyperkinesias. These hyperkinesias often bear a marked resemblance to certain types of hysterical cramps and paroxysms, except that the actions in question are on an essentially deeper level of integration. As a consequence of the pathological switching over of physical sensibilities to the sphere of the instincts, peculiar forms of anesthesia may appear; in particular, hemianesthesias or anesthetics of only single limbs, such as we often see in the classic *grande hystérie*. To these we must add the manifold neuro-vegetative disorders of the heart and respiratory system, excessive salivation or excessive dryness of the mouth, disorders of the regulating mechanism of the stomach and bowels, cerebral diabetes, etc. These symptoms are hardly ever absent in cases of encephalitis lethargica and other diffuse affections of the diencephalon, so-called diencephaloses.

Organic diseases of the thalamus and hypothalamus, and especially of the central gray matter of the Sylvius, which are accompanied by destructive structural changes, will consequently lead to neuro-vegetative disorders of the most varied natures; and also, under certain circumstances, to alterations of the fundamental psychic activities of the cerebral cortex in the shape of excitatory or inhibitory processes in the cortex; and lastly, they are bound to produce a disturbance of those impulses which are necessary for the release of certain primitive instinctive actions and their integration.

B. In contrast to the organic hormopathies, in the *functional hormopathies* or *neuroses* there are merely functional interruptions within the sphere of the function in question. According to their causes we can divide these functional interruptions into two groups.

I. The first group includes those of the functional hormopathies which have been produced by a direct mechanical or toxic disturbance in the region of the vegetative cerebral centers—functional disorders which themselves have secondary repercussions on the hormopsyché. This group includes the so-called *vegetative neuroses* or *actual neuroses* (Freud).

These include, above all, the three following disorders:

1. *The neurasthenias* (Beard)
2. *The anxiety neuroses* (Freud)
3. *The fright neuroses*

Thus, in these neuroses the primary pathological motive is to be sought not within the psyche, but in the vegetative cerebral centers; though not in the shape of structural lesions, but merely in the form of changes of the excitation potential and the distribution of stimuli within this apparatus.

II. In contrast to the actual neuroses, in the *psychoneuroses* in the narrower sense of the term, or *conversion neuroses* (which Freud calls also transference neuroses) we find primary affective disorders on the basis of the unconscious instinctual conflict. Here we have not only functional disorders in the visceral nervous system—such as symptoms of anxiety, as in the actual neuroses—but also functional disturbances emanating from the animal (cerebrospinal) nervous system. In so far as visceral disturbances occur they are distinguished from those of the actual neuroses by the fact that they are not primarily caused by physiological injury, but have a psychic origin. The affective disturbance is thus the original phenomenon in the psychoneuroses, and the disturbance of the visceral nervous system is merely its secondary consequence, its reflex which, moreover, is not bound to occur in every case. More will be said of these mechanisms in later lectures.

Of the psychoneuroses in the narrower sense of the term, we distinguish today (according to Freud) three main forms, namely:

1. *Hysterias*, or "hysterical reactions"

2. *Phobias*

3. *Obsessional neuroses*

We speak of hysteria when disorders of the cerebrospinal and vegetative innervation comprise the predominant subjective and objective symptoms; disorders for which neither an organic nor a functional organic (toxic) basis can be determined; for example, pains of a peculiar, characteristic kind, anesthetics, vomiting, paralyses, contractures, convulsions, and the like. We are dealing with a phobia when the patient has an insuperable dread of objects or situations which are in no way alarming to a healthy person; so that he finds himself compelled to avoid such objects or situations; for example, the dread of inherently quite harmless animals, the dread of traveling by rail, the dread of being alone, etc. In obsessional neurosis the patient, against his conscious will, against his own better and more reasonable judgment, finds himself constantly compelled to perform curious, apparently quite senseless, and indeed very often absolutely grotesque ceremonial actions (e.g. compulsive washing of the hands, the compulsion to touch something, etc.), or he is constantly compelled to fight and to suppress the fears which arise in him (almost always relating to other persons) or he is forced to ponder over apparently meaningless problems.

It need hardly be emphasized that the timely diagnosis and differential diagnosis of a neurosis—that is, its positive distinction from similar syndromes of organic origin—is of the greatest practical importance in respect of therapy, but also in respect of mental hygiene and prophylaxis. While certain medical practitioners are given to complaining that the psychotherapists only too often fail to recognize organic derangements, at least in their early stages (for example, the first symptoms of an organic affection of the heart or stomach), diagnosing them merely as "neuroses," and treating them as such, I might and indeed must insist that in my experience the very contrary occurs just as often, if not oftener: namely, a pure neurosis is for years mistaken for and diagnosed as all manner of organic disorders and treated as an "organic affection." Often enough years may have passed, the whole arsenal of physical technique and the pharmaceutical industry may have been tried out, and all the prescribed

rest cures, sanitarium treatments, and medical baths may have failed to relieve him, before the unhappy patient at last finds his way to a psychotherapist who with the help of his special knowledge can readily ascertain that the whole trouble, from the very beginning, is merely the physical repercussion of a concealed anxiety, a profound and secret psychic distress. But now, after years of false diagnosis and mistaken treatment, such a patient is practically incapable of benefiting by an intensive psychological treatment, though if such treatment had been applied earlier he could have been relieved, and a radical cure could have been effected in a comparatively short time. At all events, such a patient, whose original neurosis has long ago become a "clinical neurosis," has to be literally educated for psychotherapy, by a tedious and costly preliminary treatment, in order to shake his deeply-rooted belief that he is suffering from an organic affection, and to secure his fruitful co-operation in his psychological treatment. But most patients do not feel inclined to undergo such preparation, and even if they are so inclined they may not have time or money, having wasted both on innumerable useless treatments. In such cases, too, one has always to reckon with and oppose the stubborn resistance of the relatives of such an "imaginary invalid," and often enough, unhappily, their resistance proves to be insuperable.

In conclusion, here is a tabulated scheme which indicates the systematic or nosological position of the neuroses in the various groups of the hormopathies:

A. Organic Hormopathies

- I. Dysglandular (endocrine) hormopathies
- II. Constitutional endogenous hormopathies
 - a) endogenous psychoses
 - b) congenital psychopathies
- III. Cerebral hormopathies

B. Functional Hormopathies

- I. Functional organic (toxic) hormopathies; Actual (vegetative) neuroses
 1. Neurasthenia

2. Anxiety neurosis
 3. Fright neurosis
- II.* Psychoneuroses in the strict sense of the term (Conversion neuroses)
1. Hysteria, or hysterical reactions
 2. Phobia (Anxiety hysteria)
 3. Obsessional neurosis

To these must be added the so-called "character neuroses," and manifold mixed types, which we may therefore describe as mixed neuroses.

Second Lecture

THE HISTORY OF THE THEORY OF THE NEUROSES, AND IN PARTICULAR, OF THE THEORY OF HYSTERIA

Ladies and Gentlemen:

Before we go any further—that is, before we look more closely into the nature, the pathogenesis, and the mechanism of those peculiar nervous affections which we call neuroses, it will be advisable to glance briefly at the history of the theory of the neuroses, in order to obtain a comprehensive idea of the different opinions concerning the neuroses which have prevailed at various periods. I shall confine myself mainly to the history of the theories of hysteria, since this affection, owing to its conspicuous symptoms, has always awakened the interest of the medical profession, and always comes to the fore in any discussion of the neuroses.

“Nervousness”—that is, neurosis—is often regarded as a malady of today, and it is assumed that nothing of the kind was known in more leisurely and “comfortable” ages. But this is a delusion. As a matter of fact, there are highly characteristic descriptions of hysteria in the works of the Greek and Roman physicians of antiquity. If the miracles recorded in the New Testament have any real historical basis, the sick miraculously healed by Christ must have been mainly hysterical patients. We know that in ancient times such psychic affections as epilepsy and hysteria were attributed to “possession” by spirits—and such is the belief among primitive peoples today; hence the expulsion of the devil which Christ is supposed to have effected in the case of two lunatics, whereupon the “unclean spirits,” evicted from their home, entered into a herd of swine with disastrous results. Exorcism was the favorite therapy in cases of psychosis and grande hystérie, not only in ancient times, but in the Middle Ages, and there have been instances of its application even in modern times; of course, it was performed by the priest, not by the physician, as is the case among primitive peoples today. For example: Towards the close

of the nineteenth century, Pastor Blumhardt, sen., a *Herrenhuter* (Moravian Brother), declared that a hysterical girl was possessed of the devil, and proceeded to cure her by spiritual treatment. On the other hand, in the late Middle Ages, in consequence of the theory of diabolical possession, the unfortunate sufferers from a hysterical disorder were often persecuted as witches and burnt at the stake.

To go back to the ancients, we have already said that they were familiar with the impressive syndrome of *grande hystérie*, though attacks of this nature were still confused with the *morbus sacer* of epilepsy. It is particularly interesting to note that Hippocrates, the greatest physician of antiquity, attributed the affection to insufficient sexual satisfaction, and that Plato recommended immediate marriage as the panacea for hysterical virgins: "*Nubat illa et morbus effugiet*" (let her marry and the sickness will take to flight). Hippocrates attributed the psychic symptoms of hysteria to abnormal displacements of blood upwards from the internal genitalia, a theory which is remotely reminiscent of Freud's theory of the upward displacement of libidinal excitations. While Hippocrates' explanation still remained within the area of physiology, Plato evolved a much more daring theory of hysteria: The womb, he thought, was an animal which was eagerly desirous of bearing children. Consequently, if after puberty it continued to be unfruitful it ran wild through the whole body, and damaged the openings of the lungs, causing shortness of breath, and all manner of other symptoms, until it obtained the desired fruit through the union of the woman with a man. A century and a half later the absurdity of this theory was demonstrated by Galen, for this eminent physician proved for the first time that the uterus is anatomically fixed in the pelvis by means of ligaments.

While in antiquity hysteria was attributed to sexual-physiological or sexual-psychic disturbances, in the Middle Ages, and to some extent even in our own times, a crudely sexual-physiological conception of the malady has generally prevailed. For example, people believed that the affection was caused by "vapors," which rose from the womb to the brain, so that they attempted to cure hysterical attacks by means of smelling-salts. "*Madame a ses vapeurs!*" they would whisper in the salons of *l'âge galant* when the lady of the house had one of her hysterical attacks.

The ancient "hysterogenous" theory of the neuroses was based on

the notion that hysteria was somehow caused by the womb (*hystera* [Gr.] = uterus). In the first half of the nineteenth century an attempt was made to find a more scientific explanation in terms of modern pathophysiological knowledge, resulting in the theory that hysteria was a "genital reflex neurosis." It was assumed that displacements or diseases of the uterus and its adherent organs—namely, the ovaries—give rise to abnormal reflexes in the nervous system, and serious efforts were made to cure hysteria by gynecological treatment. Fundamentally, this theory was nothing more than a new and rather feeble edition of Plato's fantastic theory in modern scientific language. In this new form the genital-reflex theory of hysteria was accepted and zealously defended, even up to the close of the nineteenth century, not only by the majority of specialists in women's diseases, but also by many neurologists; indeed, individual gynecologists, like Hegar in Germany and Hadley in England, went so far as to draw the final conclusions from this theory, and in all seriousness to recommend as an "optional treatment" of hysteria the total extirpation of the internal female genitalia. They not only recommended this mutilating operation, they actually performed it on a number of young women.

This practice was followed, although as early as 1618 Charles Lepois (Carolus Piso), the court physician to Henri II of France, pointed to the fact that typical hysteria occurs even in the male sex, and declared that the malady was purely an affection of the brain. This opinion was later confirmed by the celebrated Willis, and also by the great English clinician, Sydenham (1681). However, it seems that this revolutionary theory, far from being accepted, met with the most violent opposition in medical circles. For example, in the middle of the eighteenth century, James, in his famous *Dictionary of Medicine*, calmly repeated that the womb was the seat of hysteria. And even as recently as 1886, when Freud, before the Medical Society of Vienna, gave an account of Charcot's researches into the nature of hysteria, and ventured to describe a case of male hysteria, he was simply ridiculed by his colleagues. The President, Bamberger, declared that the report was incredible, and an elderly surgeon expostulated angrily: "But, my dear sir, how can you talk such nonsense? Hysterion (*sic!*) means the uterus! So how can a man be hysterical?" Thus for centuries an erroneous description, dating from

antiquity, delayed the recognition of the real nature of the complaint. However, during the following year a number of authors stressed the psychosexual aspect of the malady: thus, Louyer-Villermay, Foville, Landouzy and Laycock, reverting to the ancient theory of Hippocrates, attributed hysteria to sexual deprivation, which was said to be responsible also for many menstrual disorders, as well as for resulting neuroses, while Cluston held that the cause of the affection was probably "a decline of the higher spiritual and moral inhibitions (1) in respect of the reproductive and sexual instincts of women." He therefore regarded hysterical patients as morally inferior. This notion is in direct contradiction to the psychoanalytic theory which holds that in the neuroses the instinctive sexual impulses have suffered inhibition (repression) by the higher moral impulses.

In contrast to the British and German neurologists, the French neurologists of the nineteenth century repeatedly denied the sexual etiology of hysteria, or rather, calmly ignored all indications of such a connection. In the French medical researches of the period Briquet (1859) was far in advance of his colleagues, inasmuch as he published, in a comprehensive monograph, a number of exact clinical observations, which for the first time succeeded in elucidating the protean and bewildering symptomatology of hysteria. As regards the etiology of the affection, Briquet laid the principal stress on heredity and environment; in the second place, on the disintegrating effect of psychic dreams; but on the other hand, he expressly repudiated any connection with sexual processes, whether physical or psychological, on the grounds—strange as they may seem coming from a scientist—that such an origin would be debasing to womanhood: an argument entirely characteristic of the mentality of the period. So great, indeed, was the general embarrassment in respect of the problems of sex that here even the man of science, following a line of scientific research, simply capitulated. Despite all the individual observations and case-reports which Briquet had collected with such stupendous diligence, he actually contributed very little to our knowledge of the nature of hysteria.

This knowledge was first made possible by Braid's discovery of hypnotism (in the early part of the nineteenth century); or rather, by the scientific application of this discovery. Braid was the first to

provide scientific evidence of the facts of hypnosis by objective experiment; though he erroneously explained the occurrence of hypnotic phenomena by physical influences emanating from the hypnotist—an opinion which, as we know, found a peculiarly fantastic interpretation in Mesmer's theory of "Animal Magnetism." It was left to Liébault (1866) and his pupil Bernheim (1884) to refute this erroneous doctrine by a vast series of exact experiments which demonstrated that the hypnotic influence can be exerted from a distance—for example, through walls—and therefore must be purely psychological. These authors sought to explain such psychic influences by the notion of suggestion, and thereby founded the modern doctrine of hypnotism, which was subsequently elaborated by such experts as Charcot, Forel, Wetterstrand, Oskar Vogt, etc. On applying hypnosis to hysterical patients it now appeared that the temporary disappearance of most hysterical symptoms could be effected by hypnotism—and therefore, that they were in a high degree susceptible to suggestion. Thus, for the first time, their psychogenic nature had been proved beyond a doubt.

A great advance in this respect was made by the important work of the brilliant French clinician, J. M. Charcot, at the Salpêtrière in Paris (1870-1890). While studying the hysterical paralysis which sometimes followed a physical accident, it occurred to Charcot that in hysterical patients who exhibited no signs of paralysis such paralysis might be artificially produced by the hypnotic suggestion of traumatic situations. In this he was surprisingly successful. For example, he was able to suggest to one of his patients, in a state of hypnosis, the complete paralysis of the right leg, which lasted for some days, by alleging that in a railway accident her leg had been jammed in the débris, so that the nerves had been crushed. The artificial, hysterical paralysis disappeared only when emphatic counter-suggestions had been made during a second hypnosis. On these grounds Charcot formulated a new theory of hysteria which, in its main features, can still be accepted today, although essential modifications of detail are necessitated by later researches and discoveries. Briefly, the theory is as follows: Hysteria is a functional nervous affection dependent on an inherited constitutional disposition. Its symptoms are the result of traumatic shocks, which take effect in moments of heightened suggestibility—that is, in moments of "hypnoid clouding

of the consciousness." In the production of such clouding of the consciousness the shock of the trauma plays the principal part. Or, to put it briefly: Hysterical symptoms are products of subconscious traumatic conceptions acquired and fixed in hypnoid conditions.

Charcot's theory of hysteria was subsequently developed and substantiated by a mass of clinical material in comprehensive monographs by his pupils, among whom were Pitres (1891), Gilles de la Tourette (1893) and Sollier (1897). Sollier enlarged Charcot's theory of the hypnoid states of hysterical patients by the interesting assumption that in such patients the state of altered and diminished consciousness does not occur merely at the moment when the trauma producing the symptoms takes effect, but that they continue to exist afterwards in a state of permanently diminished waking consciousness—that is, in a permanently hypnoid condition—which, physiologically speaking, corresponds with a "partial cortical sleep." Therefore, the therapeutic task would consist in arousing the patient gradually in a series of hypnotic treatments, from this partial cortical sleep, which gives rise to the symptoms.

On the basis of the hypnoid theory another French investigator, Pierre Janet (1893-1898), developed the theory that in hysterical patients there is a kind of psychic splitting, a "partial psychic dissociation," which almost amounts to a dissolution of the personality. Due to an innate degenerative debility of the faculty of psychic synthesis, the hysterical patient has "split off" the "partial consciousness" of the paralyzed or anesthetic extremities from the total consciousness, so that the total personality is not aware of these "encysted components of organic consciousness," and therefore can no longer exercise control over them. The ultimate cause of this peculiar disorder consists in a deficient psychic dynamism, a "psychological hypotension," which has led to a primary contraction of the field of consciousness. In contrast to Sollier, Janet regards the hypnoid state of consciousness of the hysterical patient as a primary phenomenon. Similarly, Janet then endeavored to apply his ingenious theory to the explanation of the symptomatology of the rest of the great psychoneuroses—namely, the phobias and the obsessional neuroses (the *idées fixes et obsessions*). He assumed that in these morbid psychic states certain psychic complexes of experiences or ideas are cut off from associative connection with the complete personal-

ity; in this way, they are no longer under conscious control and act independently, affecting the patient's ideas and behavior in an extraordinary manner.¹ Here again Janet sees the primary basis of the disorder in a congenital, or, more rarely, an acquired weakness of psychic synthesis; that is, in a constitutional "psychasthenia". The main value of Janet's numerous and comprehensive works, as regards the problem of the neuroses, consists not so much in his theoretical explanations as in the presentation of a mass of psychologico-casuistical material bearing on problems of psychogenesis; above all, he was the first author to subject to scientific observation and exhaustive analysis the confused and fantastic syndromes of the phobias and obsessional neuroses which the majority of physicians had entirely failed to understand.²

About this time, the conviction of the psychogenic nature of the "major neuroses" was also gradually gaining ground in Germany. But the opinions as to the internal mechanism of these affections were still rather primitive since Charcot's magnificent work remained for a long time practically unknown in the German-speaking countries. For example, Möbius defined as hysterical "all those morbid bodily changes which are caused by imagination," and this conception, derived from the normal psychology of consciousness, was adopted by the majority of German authors. Hysteria, according to this conception, was really not very far removed from simulation; such indeed was then—and is even today—the current belief of the greater part of the medical profession. The final outcome of this conception is plainly evident, especially in the current theories of "Accident and Pension Neuroses" (Reichardt, Stier, Bonhoeffer, Lottig, et al.), according to which the so-called "pension neuroses" are supposed to depend on "wishful ideas"; the insured person producing his "symptoms" more or less consciously and intentionally, in order to derive the maximum of profit from his accident, in the form

¹ In this and other similar formulations Janet seems to be already largely influenced by Freud, and especially by the psychoanalytic theory of repression. Janet himself has vigorously denied that he has been so influenced, and asserts, on the contrary, that Freud has unconsciously allowed himself to be inspired by his, Janet's, ideas. We need not take sides in this dispute as to priority, since the theory of repression is only one brick in the mighty fabric of Freud's theory, whose fundamental importance and complete originality of conception are beyond all question.

² In the textbooks they were generally treated very briefly, in an appendix to the chapter on "Neurasthenia," or were merely enumerated.

of a life-pension. But Babinski's theory (cf. p. 15), according to which only such phenomena are to be regarded as "hysterical" as can be deliberately imitated, is really founded on the same conception, and is therefore a deplorable regression from the far profounder hypnoid theory of Charcot and his pupils. However, even in this period of regression from Charcot, other investigators have advanced our knowledge of the problem; for example, Oppenheim, O. Vogt, Forel, O. Binswanger, Dubois and others, in their works on hysteria and the neuroses in general, laid stress upon the affective side, and saw the fundamental disorder in the increased affective excitability and the morbidly enhanced influence of emotions on the bodily (motor, sensory, secretory) processes which accompany emotions.

But a new era of research into the neuroses was opened by a monograph published in 1895 by the two Viennese neurologists Joseph Breuer and Sigmund Freud, under the modest title *Studien über Hysterie*. This monograph attracted much attention, and the first of the "studies" was particularly sensational. In this Breuer described in detail a novel treatment of an hysterical patient. This method of treatment was his own discovery. A girl of twenty-one, of great intellectual ability, had become violently hysterical during a strenuous period of nursing. She was worn out with attending to her dying father. The following symptoms appeared in succession: paralysis and contracture of the right arm and leg with anesthesia in these extremities; squinting; impaired vision; nervous cough; weakness of the neck muscles; nausea at the sight of food and inability to drink water despite a distressing thirst; further, loss of the ability to speak and understand her mother-tongue, so that she could speak and understand English only; finally, states of general confusion amounting to delirium and epileptiform "absences"; that is, brief eclipses of consciousness during which she explosively uttered or murmured certain curious words.

Breuer now put the patient into a state of light hypnosis, repeated the apparently meaningless words which she had stammered out during such an eclipse of consciousness, and asked her to add something to them. The patient proceeded to do so, producing, in connection with each of the aforesaid words, a series of affectively charged memories—reminiscences which usually had their starting

point at her father's bedside. The treatment, as explained, was conducted only in the English language.

After each such conversation, which the patient herself described as a "talking cure" or a "chimney-sweeping" (a cleansing of the soul) she awakened as though relieved. But it presently appeared that by this "cleansing of the soul" far more was achieved than a mere passing alleviation of and liberation from the constantly recurring clouding of the consciousness. It led to the gradual and permanent elimination of all the hysterical symptoms in so far as it was possible in hypnosis to bring back to the patient's consciousness the recollection of the occasion and the time when the symptom in question first made its appearance. At the moment when the situation in question re-emerged in the patient's memory there was always a strong emotional disturbance, and after waking the physical affection had disappeared for ever. For that matter, most of the symptoms appeared to have a number of exciting causes: that is, they were "over-determined." Therefore it was useless to attempt to expedite the cure by a more summary procedure. As long as not all the individual occasions which had led to the occurrence of the symptoms had been brought back into the patient's memory singly, in a number of sittings, and affectively discharged—abreacted—some trace of the symptom in question always remained. To elucidate this by an example, I will quote from Breuer (p. 26):

"The first time one of those troubles, already of long standing, disappeared, as a result of a fortuitous and unprovoked utterance during the evening hypnosis, I was greatly surprised. It was in summer; the weather was intensely hot, and the patient had been suffering greatly from thirst; then, although she could give no reason, it suddenly became impossible for her to drink. She took the longed-for glass of water in her hand, but the moment her lips touched it she jerked it away as though suffering from hydrophobia. At the same time, for these few seconds she was evidently 'absent.' She was living only on fruit, melons, etc. in order to assuage her distressing thirst. When this had been going on for some six weeks, she one day discussed her English companion during hypnosis; she did not like her, and she related, with every sign of aversion, how she had gone into her companion's room, and there her little dog, that nauseating creature, had drunk out of a glass. She had not said anything, as she wanted to be polite. After she had again given vigorous expression to her lingering annoyance she asked for something to drink, and drank, without inhibition, a great deal of water, and awakened from hypnosis with the glass at her lips. The trouble was therewith permanently dispelled. Other curiously persistent whims disappeared after the incident, which had occasioned them, had been described . . .

From these experiences, showing that the hysterical phenomena exhibited by these patients disappeared as soon as the event which had occasioned the symptom was reproduced during hypnosis, a therapeutic technical procedure developed which in logical consequence and systematic performance left nothing to be desired. Every individual symptom of this intricate syndrome was taken by itself; all the occasions on which it had occurred were described in inverse order, beginning with the days before the patient had taken to her bed, and working back to the occasion of its first appearance. If this was described the symptom was banished for ever. In this way the contracture paresis, the anesthetics, the various visual and auditory troubles, the neuralgias, coughs, tremors, etc., and finally even the impediments of speech were 'talked away.' Among the visual disorders, for example, the following were cured individually: Strabismus, accompanied by double vision; deviation of both eyes toward the right, so that the hand, on trying to grasp an object, always went to the left of the object; restriction of the field of vision; central amblyopia; macropsia; seeing a death's head in the place of the patient's father; inability to read. Only those individual phenomena eluded this analysis which had developed during the patient's illness, such as the extension of contracture-paresis to the left side, and which, in all probability, really had no direct psychic cause.

"It proved to be quite impracticable to expedite matters by attempting immediately to evoke in the patient's memory the first occasion of the symptom: She could not find it, and became confused, and the search took longer than if one allowed her quietly and confidently to unreel the selected thread of recollection."

Breuer then gives, as an example of "the exhaustive thoroughness, in every respect," with which the analysis was conducted, the case of the psychogenic deafness of a patient which proved to be determined by no fewer than 303 individual incidents and occasions, all of which were reproduced in the patient's memory; he continues:

"Here again it was regularly observed that, while a symptom was being 'talked away,' the symptom appeared with increased intensity while it was being described. Thus, during the analysis of deafness the patient was so deaf that part of the time I had to communicate with her by writing. As a rule the first occasion of the symptom was some sort of fright, such as the patient had experienced while nursing her father; an oversight on her part, or the like."

To this extraordinary case Freud appended a series of his own observations, which not only completely verified Breuer's discovery of the mechanism of symptom formation, but also afforded further and significant glimpses of the psychogenesis of this interesting malady, which went far toward confirming the new theory of hysteria advanced by the two authors. The method of exploration during hypnosis, which was originally adopted by Breuer, and which Freud, for reasons which we shall presently consider, afterwards abandoned,

was described as the "psychic cleansing cure," or the *cathartic method*, after the description which a patient had applied to it in jest, calling it a "chimney-sweeping." The fundamental importance of these classical studies of hysteria consists in the fact that both these authors had been able, for the first time, to achieve the causal understanding and cure of serious cases of hysteria by revealing the psychic conditions of their development. On the basis of their discoveries Breuer and Freud were able to supplement Charcot's theory of hysteria at essential points—in the first place, by replacing the physical trauma with the concept of the psychic shock or affront as the original cause or motive of hysterical symptom formation, and further by discovering a significant connection between the psychic trauma and the symptom. The new Breuer-Freud theory of hysteria was as follows:

Hysterical patients suffer from reminiscences; their symptoms are fixed expressions of affect (fixed expressive movements) which in moments of enhanced autosuggestibility—that is, in hypnoid conditions—were acquired through the influence of psychic traumata.

During the next few years Breuer did not follow up his important discovery, but directed his attention to other medical problems. Freud, on the other hand, continued without interruption to work on the problems of hysterical symptom formation and the nature of the functional neuroses. At that time, when he was co-operating with his friend Breuer, he had just returned from Paris, and was still profoundly impressed by Charcot's experimental researches into the problems of hysteria. Fascinated by the mysterious features of the complaint, he continued Breuer's work of investigation. But in applying Breuer's method of investigation he soon encountered unexpected difficulties: Above all, despite all his efforts he succeeded in producing the requisite depth of hypnosis for the cathartic treatment only in a fraction of his patients, for we know that by no means all persons are equally susceptible to hypnosis and many cannot be hypnotized at all. Freud then recollected an experience of his while working with Bernheim in Nancy: It had hitherto been accepted as an established fact that hypnotic subjects, after awakening from hypnosis, had no recollection of what had passed during the hypnotic sleep; although subsequently, in the waking state, they carried out the posthypnotic suggestions which had been made to them by the

hypnotist, they allegedly had no notion that they were obeying the commands of the hypnotist; on the contrary, it seemed to them that their actions were due to peculiar, spontaneous impulses, as compulsive actions for which they could allege no motive. One day, however, Bernheim showed his pupils that this so-called "posthypnotic amnesia" had no real existence, or was only a relative amnesia: By insisting, and repeatedly assuring the subject that "she knew it perfectly well" (supporting the statement by laying his hand on her forehead) he succeeded in the majority of cases in bringing back to the subject's memory what had passed during the hypnosis, at first in a fragmentary fashion, but then more and more clearly and completely. Freud was now able to profit by this experiment of Bernheim's, inasmuch as he proceeded from the hypothesis that hypnotism is really nothing other than a sort of artificial hysteria. Thus, when in the course of treatment he had reached a point in the psychic exploration where the patients declared that they could not think of anything further to say, Freud assured them, vigorously, that something would certainly occur to them; they had only to say everything, without any sense of embarrassment; just everything that came into their heads, and they could be sure that anything that occurred to them would have some relation to what they declared they had forgotten, though the relation might not at first be very apparent. In most cases this hypothesis was justified. Freud found that the trend of our associated ideas is by no means "fortuitous" or arbitrary; rather, when we leave it free to follow its own course, our train of thought is largely determined by psychic forces operating below the threshold of the normal waking consciousness; through the "free association of contiguity," these subconscious or unconscious psychic processes can be made largely accessible to the waking consciousness. Thus Freud evolved a new and quite original technique for the psychic exploration of his patients; the technique of "free association" or "free ideas." The patient lies on a comfortable couch, as completely relaxed as possible, but fully awake. He is merely told to give a running account of whatever is rising into and happening in his consciousness from one moment to the next, eliminating all conscious criticism. He must not exclude any emergent idea from his communications, even if it seems to him silly or meaningless, or if he regards it as utterly unimportant and irrelevant. He must report

every idea regardless of whether he thinks it can have no relation to his illness, to the symptom or the subject which has just been discussed; regardless of his inclination to say nothing about a certain matter because it is too painful or disgusting to be related; regardless of considerations of discretion in respect of a third person ("the fundamental rule of psychoanalysis"). If this rule was observed consistently, it could be demonstrated that just these psychic elements, which normally remain in the subconscious or unconscious, regularly play the principal part in psychoneurotic symptom formation, and that these subconscious or unconscious psychic impulses are generally kept out of the consciousness by a more or less powerful resistance which opposes their emergence. Without exception, these resistances pertain to strong affectively charged incidents, recollections, fantasies, and wishful impulses; many of these date from early childhood and originate almost exclusively from the person's sexual life. On account of their proscribed sexual content these impulses were in conflict with the requirements of the moral ego; they met with ethical, religious, aesthetic and social inhibitions, and were therefore excluded from the waking consciousness. On the other hand, these proscribed and repressed impulses of the primitive, infantile, instinctive part of the personality, of the so-called *Id*, frequently recur in dreams, though generally only in a disguised and often symbolic form, so that a special technique of interpretation (dream-interpretation) is required to make them accessible to the consciousness in this distorted form. On countermanding the repression—that is, when the repressed psychic content of the unconscious emerges again, after the patient's resistance has been overcome, just as happened in Breuer's classic case—we can regularly observe a marked release of the affects which had been bound up with ("*eingeklemmt*") the symptoms. These affects appear in their original form and in relation to the original object. The release of the repressed affects is followed by the disappearance or cure of the symptom which had bound the affects. Another circumstance of the greatest practical importance is the fact that during the treatment we invariably find that the affects released from their pathological connection with the symptoms are transferred to the physician—much as the oxygen liberated from a chemical combination is especially active *in statu nascendi* (since it then possesses a so-called "free valency") and in this condi-

tion shows a special tendency to combine with any element that happens to be present.

With the help of his new procedure, which Freud called the method of psychic analysis or psychoanalysis, he undertook methodical and patient investigations of the unconscious psychic connections leading to symptom formation. In rapid succession, Freud made a number of new discoveries which established new foundations not only for the theory of the neuroses, but also for the whole province of scientific psychology and indeed anthropology itself. In fact, the discovery of the unconscious and its systematic analysis by Freud was of equal importance for psychology as the discovery of Copernicus, that the earth revolves round the sun, was for astronomy: it effected a total revolution of psychology which, completely bogged in the so-called method of objective experimentation, had hitherto done next to nothing toward elucidating psychopathological processes. With the help of the psychoanalytic method Freud (and subsequently his pupils) for the first time succeeded in curing a great number of the most obstinate chronic neuroses which had hitherto defied every species of therapy. The cures he effected were real cures inasmuch as they sufficiently satisfied all practical requirements. By the discovery of intelligible psychic associations with the help of Freud's historico-ontogenetic method, the theory of the neuroses was promoted from the status of a merely descriptive and classificatory science to the rank of a science of understanding—a medical psychology which, like any other branch of medicine, could now trace its derivation from the history of individual development (ontogeny), and especially from the development of the instincts in the child. On the reliable basis of innumerable clinical observations Freud was finally able to formulate a general theory of the instincts (metapsychology) which, on the one hand, from the standpoint of general biology, proves to be far better founded than any of the more philosophically orientated attempts in this direction, while on the other hand it has shown itself to be of far greater practical service in the treatment of psychopathic patients. Further, it appeared that there were astonishing folk-psychological parallels between the world of the neurotic and the mentality of the primitive peoples; so that psychoanalysis pointed the way to a new understanding of the unconscious background of poetical and artistic production; in short, by the application of the psychoanalyti-

cal method of exploration to the various phenomenal forms of human culture, valuable hypotheses were formulated for the scientific exploration of the domain of the so-called psychic sciences (applied psychoanalysis).

This, of course, is not the place to give detailed description of Freud's psychoanalysis and its further development into a comprehensive system of anthropology. Much will be said to this effect in the following lectures. However, in this brief historical sketch we have to emphasize the fact that hardly any opinion concerning the nature and the psychic mechanism of the neuroses, and indeed, the profounder structure of the human psyche, has ever caused such a sensation; no other has been so passionately challenged, so bitterly opposed, as the psychoanalytical theory—and this not only by educated laymen, but even more so by the "appointed" representatives of official medicine, including the majority of psychiatrists. As we have seen, Freud's very first communications were received by his professional colleagues with incredulous amazement, and as time went on they were almost universally rejected, the criticisms of their opponents not seldom assuming such forms as had not hitherto been customary in scientific journalism. Particular exception was taken to Freud's assertions concerning the sexual life of children, and the decisive importance of sexuality in the etiology of the neuroses; so that he was accused, as we know, of "pansexualism" (Hoche et al.). Further, his theory of dreams, especially his interpretation of dreams, and his theory of the symbolism of dreams, and even his fundamental theory of the existence and reality of unconscious psychic processes, was for a long while not only flatly contradicted by medical critics, but was absolutely ridiculed. Other critics, like E. Michaelis, Prinzhorn, and H. Kunz, who were after all on a much higher level, reproached Freud with denying the existence, or at least the efficacy, of the higher ethical and religious forces in humanity. They claimed that he saw only the instinctive elements of morality, and even that he had repressed his own ideas, etc. Thus, Freud and his pupils were, so to speak, forced from the outset to assume the defensive. Isolated from their professional colleagues, often, indeed, positively outlawed, the psychoanalysts found themselves restricted to their own society, and compelled to close their ranks; with the result, on the one hand, that they were promptly accused of "sectarianism," while, on the

other hand, they were in real danger, as time went on, of gradually losing contact with organic medicine, and therewith of tending toward a one-sided over-estimation of the range of the psychogenic disorders, and of indulging in overprecise theoretical formulations. In the meantime, however, a few eminent psychiatrists entered the lists precipitately on the side of the psychoanalysts; above all, Eugen Bleuler, the distinguished scholar and director of the psychiatric clinic of Zürich, together with his entire staff of assistants (C. G. Jung, A. Maeder, etc.). Bleuler had achieved an international reputation by his research into the nature of schizophrenia, in the course of which he had largely confirmed Freud's theory of symbolism. But here and there the "psychoanalytic movement" received valuable support from lay circles; in particular, from the Zürich pastor and scholar, O. Pfister, who indefatigably propagated Freud's theories in a number of vigorously written books, and contributed more than anyone to popularizing his doctrines and making them known throughout the world.

Further, we must briefly consider a few divergent conceptions and schools of thought which, though they all owed their origins to the Freudian school of psychoanalysis, had broken away from it at a comparatively early stage. These "renegade movements," as the creator of psychoanalysis himself had reproachfully called them, could not, even in their present form, deny that they owe their origin and their efficacy to the genius of Freud, accepting as they do certain of his fundamental conceptions (the unconscious, resistance, repression, transference, dream interpretation, symbolism, the historico-ontogenetic approach, and consequently, the historico-analytic procedure in therapy).

Comparatively trifling—at least from the standpoint of practical therapy—are the differences which distinguish Wilhelm Stekel's "analytic psychotherapy" from Freud's psychoanalysis. It really differs from the "orthodox" Freudian school (as Stekel calls it) only in its systematic avoidance of scientific elaboration and theoretical elucidation, and the consolidation or systematization of the observed clinical situation; and, as regards therapy, in a striving for activity at any price; that is, an active forcing of the cure by all and every means, above all by means of ruthless interpretations which are often prematurely "thrown at the patient's head" (the so-called "key tech-

nique" in which symbolism is applied like the key of a secret code), and in the extensive use of suggestion. Stekel's apparently insuperable horror of any sort of "theorizing" gradually led to a simply indescribable confusion, with the consequence that this author's numerous books teem with nonsensical and contradictory statements. Further, the endeavor to achieve the greatest possible "activity" led to an abbreviated procedure; Stekel's analyses, even in the most difficult cases, do not take longer than two to four months at the very utmost (so that Christoffel, in the *Psychoanalytisches Volksbuch*, recently, and not without justification described this kind of analysis as a "dumping process"). Any patient who does not recover within this brief period obviously does not wish to be cured, so there is really nothing to be done for him. At the same time, Stekel, as one may readily convince oneself by careful perusal of his case reports, accepts *de facto*, despite his incessant polemics against Freud, all the fundamental doctrines of psychoanalysis as enumerated above—and even more—and like any other psychoanalyst, is constantly applying them in practice.

Alfred Adler, on the other hand, in his *Individual Psychology*, departs widely from the theoretical bases of the Freudian theory of neuroses; above all, he dethrones sexuality from its primacy as an etiological factor, replacing it by the drive for power, the drive to "get on top." Misguided ambition, arising from a primary organic inferiority, or a general constitutional weakness, leads to deeply rooted feelings of inferiority, which call imperiously for an over-compensation. The neurotic symptoms and defects of character arise as the result of a morbidly exaggerated "masculine protest," and on this foundation a system of fictions is developed which take the place of reality and lead to the spasmodic pursuits of a spurious goal. To sexuality, and even to sexual symptoms and perversions, no special significance should be attributed; on the contrary, even the sexual symbols are only a sort of "jargon," a *façon de parler*, in short, a peculiar way of giving expression to the misguided "will to power." The task of therapy is therefore to make the patient conscious of his fictions, to show him that he has been following a false direction, that he has based his life on a lie, and to indicate new paths which will enable him to take his place again in the world of reality and the social order. In short, one may say that Adler's theory, in which

there is certainly a great deal of truth, is primarily a psychology of the ego, in contrast to psychoanalysis which deals with the instinctive strivings of the phylo- and onto-genetically ancient organic unconscious, the Id.

Even in the *Complex-psychology* or *Analytical Psychology* of C. G. Jung sexuality has to a great extent lost its position of primacy. Sexual symbolism, as it appears in the various productions of the unconscious—in dreams, psychotic delusions, myths, and in the religious conceptions and rites of primitive peoples,—has, according to Jung, in addition to its concrete, sensual significance, a second and higher “anagogic” significance. Beside the individual unconscious which comprises the *intra vitam* repressed, affect-laden contents (“complexes”), there is also a super-individual or collective unconscious which, like the instincts, exists before all personal experiences and contains the general, inherited forms of perception and apprehension, typical for humanity as a whole; i.e. the so-called “archetypes.” They represent the enormous spiritual legacy of human evolution; they are, as it were, the images of general human experience, as it was acquired, in the course of thousands and thousands of years, in typical, ever-recurring situations, so that on occasion they re-emerge in the consciousness of the individual if such an immemorial situation recurs in his own life. According to Jung, these archaic forms of apprehension and intuitive perception comprise, in their essence, among all the peoples of the earth, and in all stages of culture, similar symbols of human relations, and above all the religious and mystical (esoteric) symbols. Even in dreams these play a predominant part; so that the interpretation of dreams always requires, in addition to the discovery of the historico-ontogenetic connections (interpretation on the “object level”), an expansion in this direction, an “*amplificatio*” (interpretation on the “subject level,” with reference to the archetypal motives). In the archaic phantasms of schizophrenia the collective unconscious emerges without disguise. But even the neuroses cannot be explained merely by the opposing tension between the biological-instinctive and the moral, for here we have also a defective self-development, so that the neurotic patient never attains to his real self, to his profounder, immanent spiritual vocation, and is in danger of perishing of this self-dissension. It is important also to pay some attention to the repressed, undeveloped second per-

son of the ego which Jung describes as "the shadow," since the complete unfolding of the total personality can be achieved only by its reabsorption. Treatment, therefore, must not be restricted to the reduction of infantile regression and re-adaptation of practical behavior to the reality of life, but must become a synthetic treatment, on a second, higher level (the "level of transformation"); that is, the treatment must aim at helping the patient to recover his "deeper self." In accordance with his rejection of the "merely sexual theory" of the neuroses the Freudian concept of libido becomes in Jung's terms the general dynamism of the psyche, or simply the "vital force."

To sum up: Jung's Analytical Psychology may be characterized by the fact that in it the predominantly biological approach of Freud is to a great extent replaced by a psychological approach. Jung is interested mainly in exploring the esoteric symbolism of the mythologies, the various forms of mysticism (gnosis, alchemy, the secret doctrines of the East, etc.), and the religions, together with their folk-psychological parallels among the primitive peoples. This archaic symbolism, in respect of which Jung is one of the most eminent authorities, is frequently invoked and utilized, in accordance with his views, even in therapeutic analyses, in the deeper psychological interpretation of individual psychic processes.

Lastly, Otto Rank, one of Freud's oldest collaborators, had diverged from his master's theories in attributing a unique importance to the "trauma of birth"; that is, to the traumatic impressions connected with the physical distress caused by the process of birth, and the first separation from the mother. He made this trauma the very turning point of the neurotic disposition—a view which, biologically speaking, is hardly tenable.

One comment in conclusion. However one may estimate the constructive contribution of these divergent schools of thought to the theory of the neuroses and to anthropology in general, it is clear that all these doctrines proceed from the deeper psychology of the person. Further, one thing is certainly established: since Freud's work, it has become impossible to conceive of a general theory, or a really causal therapy, of the neuroses, without such an orientation toward the psychology of the deeper personality levels.

Third Lecture

POPULAR OPINIONS AS TO THE NATURE OF THE NEUROSES

Ladies and Gentlemen:

In the last lecture I sketched, in broad lines, the history of the scientific opinions concerning the nature of the neuroses. We have now to consider, briefly, some of the popular opinions as to the nature of the neuroses, and of "nervousness" so called: opinions very widely held, but not any more correct on that account. As a matter of fact, the consideration of these popular opinions will best tell us what neuroses is not.

1. First of all, we must mention an opinion which formerly had many adherents even among physicians, and even to this day is probably regarded by many with a secret sympathy; although, fortunately, it is now so obviously antiquated that it is but rarely taken into serious consideration, and then only in respect of certain phenomenal forms of the so-called "accident neuroses": I am referring to the simulation theory of the neuroses—that is, the opinion that the neurotic is not really ill at all, but is only pretending to be ill, in order to gain certain advantages. For many people—and not only for the uneducated—the notion of hysteria is practically equivalent to that of wilful simulation or, at least, habitual exaggeration (aggravation), and a hysterical patient is a person who consciously and systematically proceeds to tyrannize and distress those about her by her complaints of imaginary pains and all sorts of invented infirmities. The theory of the so-called "pension neurosis" which was advanced in the twenties of this century by a number of German authors (Bonhoeffer, His, Reichardt, Stier, Jossmann, Lottig, etc.) and which still has many supporters, is fundamentally, whatever may be said of it, merely a simulation theory.

2. Closely related to this certainly quite naïve theory of the neuroses and therefore to be considered in conjunction with it, is the

familiar popular opinion that the nervous patient "is simply imagining his troubles"; he could be perfectly well if only he would pull himself together a little. This opinion might aptly be called the imaginative theory of the neuroses. It is greatly favored by the relatives of patients suffering from chronic hysteria. This conception of neurotic disorder derives its apparent justification from the fact that all the physicians consulted by such a patient during the course of his protracted illness (and their number is likely to be considerable if the chronic hysteria has persisted for years) have all without exception asserted that they could detect no organic disorder; that all the internal organs, examined one by one with the help of the most up-to-date aids to diagnosis, were perfectly healthy. On the basis of such negative results, a physician will often go so far as to assert: "There's nothing whatever the matter with you. You are perfectly healthy." But from that time onwards the neurotic is completely damned in the eyes of any but the most benevolent and understanding observers, for they see in him the *malade imaginaire*, the tragic-comic type so brilliantly depicted by Molière. From this point to preferring a charge of simulation is only a step—a step which seems particularly obvious when the patient is insured against sickness or accident, so that he can draw a daily dole or a yearly pension in respect of his infirmity—in short, when he can lay claim to benefits for which he need not provide an equivalent in the form of labor.

This opinion is held not only by the lay public, however, but also by the greater part of the medical profession, which even today lays too much stress on organic symptoms, so that it often neglects to acquire the most rudimentary knowledge of psychopathology. They believe that the sufferings of the nervous patient for which they can find no explanation in the form of morbid alterations in the organs are more or less the product of imagination (but after all, of a morbid imagination). Or, to put it in more scientific language: Neurotic patients are the victims of an enhanced autosuggestibility combined with "weakness of will." Apparently the sensational results and achievements of hypnotism merely helped to broadcast and confirm this medical opinion, since hypnotism demonstrated to all the world the psychogenic nature of nervous symptoms and the possibility of "curing" them by suggestion. Therefore, it was erroneously concluded that one only had to use vigorous persuasion with neu-

rotic patients (waking suggestion), or even, if necessary, to "treat them rough," to "discipline" them, in order to induce them to abandon their various "autosuggestively acquired fancies." There is a very great danger that the physician may adopt a certain ironical undertone, which is detected not only by the patient, but also by those about him who will themselves adopt it in their dealings with the sufferer. It may be granted that by such behavior one might for the time being make many a neurotic so impatient of his disorder that the symptoms might show some temporary alleviation, or the patient might simply pretend that they had disappeared. But no permanent results could ever be attained by such methods. The same objection holds good of another therapeutic result of the medical autosuggestion theory of the neuroses; namely, the facile suggestive therapy, so readily and inadvertently adopted by physicians in a hurry to produce results. Many physicians are actually convinced that it is enough to assure the neurotic, after a physical examination: "There is nothing whatever the matter with you—your heart, lungs, nervous system, and so forth are perfectly sound. You are certainly not suffering from tabes or softening of the brain; you have nothing to worry about, etc." They believe that the patient, after such an assurance, is already half cured. Such well-meaning and encouraging assurances will often help the patient for a few hours, days, or weeks, in accordance with the reputation and authority of the physician in question. But then the symptoms recur; the anxiety, the restlessness, the hysterical pains return, and usually with redoubled violence, driving the patient to the doctor again; or now, in most cases, to another doctor. And if, a few days later, the patient again visits the same doctor, complaining, perhaps, that instead of showing the expected improvement his condition is worse than ever, and addressing the physician in such terms as the following: "Doctor, the medicines you prescribed for me have done me no good at all; on the contrary, I am worse than ever," the practitioner feels this almost as a personal affront. A little more and he would give audible vent to his annoyance. "*Hysteria crux medicorum.*" This old medical ejaculation has lost none of its force today. But nowadays it also expresses the fact that neurotic patients are not, as a rule, too popular with the medical profession. This may be the principal reason why so few doctors are able really to help these sufferers.

The conclusion that nervous symptoms, because they can be suppressed by suggestion for a time (though not really cured) are also called into existence by suggestion, whether by heterosuggestion or autosuggestion (in popular parlance, imagination)—this conclusion is of course erroneous. There is only this much of truth in it: that autosuggestive motives may help to fix and to aggravate neurotic symptoms or neurotic attitudes; but even in this case autosuggestion has to be offered material to work upon; in other words, neurotic symptoms or attitudes must already be present. For it is, after all, quite clear that it would not occur to any healthy person wilfully to "imagine" distressing bodily symptoms, distressing and obsessive ideas; that is, to "suggest" them to himself, since he himself would be the worst sufferer from them. No, by harboring such suspicions—i.e. suspicions that the neurotic symptoms are simulated, or deliberately evoked by autosuggestion—we should be doing the sufferer the greatest injustice; and above all, we should only drive him farther into his neurosis, since now, in addition to his other troubles, the patient would be forced to make a desperate fight for the recognition of the reality of his symptoms which, in most cases, would only then begin to be real.

But there are also purely physiological arguments against the theory that neurotic symptoms are "imaginary"; arguments which show that the theory is quite untenable: Try, for example, just for once, to "imagine" a toothache. I will wager that not one of you would succeed, even after hours of effort, in evoking such a hysterical pain-phenomenon by deliberate intention; though we constantly observe such symptoms in our patients; symptoms whose reality we can recognize without more ado by the involuntary pain-reflexes, and other vegetative concomitant phenomena, which absolutely cannot be simulated. Just as little can one deliberately "imagine" that one is happy when one is miserable, or vice versa. And this fact already tells us what is the essential condition of such an enhanced autosuggestibility as we observe in the neuroses (and especially in hysteria): It is apparently the pre-condition of a corresponding mood or emotional attitude, that is, of an affective disposition; and this does not proceed from deliberate and intellectual considerations, or so-called "reasons," but from the neurotic depression itself. In other words: the enhanced autosuggestibility of the neurotic is in itself a

pathological condition; it is in itself a neurotic symptom, a secondary effect, but not the cause of the already existing psychoneurotic alteration of the ego.

It is true that against this argument the objection may be raised that there is such a thing as the "will to suffer." This will to suffer might have the result that people of a masochistic temperament would show a distinct tendency to take refuge in autosuggested sufferings, or to create troubles for themselves by the immediate power of their imagination. But after what has been said, this objection is readily answered in the following terms: Undoubtedly masochism plays a very important part in the neuroses, but it is itself a neurotic symptom; its motives do not emerge from conscious deliberation; they are rather the consequence of a defective development of the instinctual life since childhood.

In respect of the mental hygiene of the neuroses, it will readily be understood that it is absolutely useless—at all events, in the long run—in the case of a neurotic who is already manifestly ill, to make the attempt simply to talk him out of his symptoms, or to make light of them. For him, his morbid bodily or mental conditions are just as real as the symptoms of a patient suffering from an organic disease. Such an attempted "treatment" will merely give him the impression that the physician does not take his illness seriously, so that he will no longer have any confidence in him. And if the discussion of the patient's symptoms is not extremely tactful, he will only be confirmed in his resistance—the procedure will simply have encouraged his "flight into illness"; in short, the neurotic will react by an aggravation of his condition.

3. Another opinion which is widely held—especially among the patients themselves—is that people become "nervous" as the result of physical exhaustion, or in consequence of exacting mental activity—that is, through "mental overwork." In this connection people are fond of speaking of the "hurried life of the city" which intensifies the struggle for one's daily bread. Nervous patients, by attributing their sufferings to such factors, are merely adopting an opinion as to the etiology of neurasthenia which only a few years ago was the generally accepted theory of the scientists, and which even today is held by the great majority of physicians: namely, the theory of the cause of nervous debility, so-called, or neurasthenia, which in 1880 was

advanced by the American physician Beard. This theory has of course been generally adopted by the lay public, which unthinkingly extends it to include all forms of neurosis. The reasons why such a derivation of neurotic troubles should be especially popular among the patients themselves are obvious—and 90 per cent of all neurotics attribute their illness to overwork. This theory enables them, as no other would, to attribute their sufferings to external and perfectly respectable causes—causes for which they are not responsible, but which, on the contrary, are actually to their credit. In other words: this etiology allows the patient to rehabilitate his illness, not only in his own eyes, but in those of his environment. The secret sense of guilt under which every neurotic suffers undergoes a welcome appeasement. For the time being, at least, since the patient's unconscious is not disturbed—that is, does not allow itself to be bribed—one may conjecture that in spite of this appeasement anxiety will continue to exist, and on occasion will break through again in its original form of elementary moral anxiety.

It must be granted, however, that the derivation of the neuroses from bodily and mental exhaustion has in many cases something almost tempting about it. For we often witness the outbreak of serious nervous disorders at the conclusion of a period of special physical or mental exertion; as in the famous case recorded by Breuer, when a young girl fell seriously ill with hysteria after a period of exhausting sick-nursing. So, when a business man attributes his "nervous breakdown" to a particularly trying and difficult spell of business, why should we not believe him? Well, because in 99 per cent of such cases the actual causal connection is entirely different. Of course, when such a "nervous breakdown" is a simple neurasthenia we might perhaps accept Beard's etiology. It is, however, a striking fact that the same factor is made almost exclusively responsible for the most dissimilar neurotic syndromes—such as anxiety-hysterias, compulsion-neuroses, and even the typical hysterical phenomena of conversion. Now, it is not easy to see how so unspecific a factor as physical or mental over-exertion can give rise to such special symptoms as obsessive ideas, or a phobia. If we look more closely into such cases we shall almost invariably find that the same person who would now seek to attribute his psychical sufferings to intellectual over-exertion, and to nothing else, formerly underwent

years of even greater drudgery without suffering from them; that is, in those days, despite his exertions, he was always active and cheerful, always felt "absolutely in the pink." Why did he not fall ill of his neurosis then? ¹ Some factor must have intervened in the meantime which a few years ago had not the same importance as now. And the closer we get on the track of this unknown factor the clearer does it become that the true causal connection between the intellectual over-exertion and the outbreak of the neurosis in these cases is almost without exception the exact reverse. The man did not fall ill as a result of his exertions, but because he had become neurotic in the meantime he was now no longer equal to the strain of his professional activities. In other words, in the majority of such cases the patient has confused cause and effect.

From occasional over-exertion one recovers easily enough after sleeping the clock round, as any recruit on leave will tell us. But over-exertion is in some respects a peculiar thing; it even has its psychic aspect, which is not, as a rule, sufficiently considered. For example, the spiritual mood, the mental attitude in which one undergoes toil or hardship is by no means a matter of indifference: whether one is acting of one's own free will, whether one is active and enthusiastic, or passive; or whether one is more or less subservient to external compulsion. For example, under certain circumstances a military route-march of five hours may be far more exhausting than a ten-hours' excursion in the mountains, although the absolute expenditure of energy, expressed in foot-pounds, will be twice as great in the second case. But the "emergency function" of the sympathetic system, of which you will hear something later, was operating on quite a different level in these two cases, and this function depends very largely on psychic factors, and above all, on mood. For the rest, in this respect a general provision ensures that "the trees don't grow into the sky," inasmuch as the nervously healthy person—that is, anyone who is not neurotic—automatically regulates his physical and mental need of restoration and sleep, and in the last resort is simply refractory in his behavior if excessive demands are made upon him. If this automatic psychic regulation

¹ Presuming, of course, that it was a real neurosis and not the beginning of some senescent affection of the brain, such as cerebral arteriosclerosis, senile dementia, or some other similar condition, which would explain his collapse.

should fail to operate, it will be found that a psycho-neurotic mechanism is behind the failure: a morbidly exaggerated ambition, for example, or a neurotic, compulsive over-conscientiousness, such as we find in so many high school girls who are undergoing preparation—without any real inner conviction—for a scientific or artistic career. The conscious will is then opposed by an unconscious No, whose voice one seeks to drown by restless, strained over-activity. The gradually increasing fatigue, which in itself would last only a few days and would promptly yield to an intervening period of rest, is at once exploited by the unconscious *advocatus diaboli*, in order to disguise the deeply-rooted sense of inferiority, whereby illness is favored as a temporary evasion from (or better, a postponement of) a situation which has become untenable. The outbreak of neurosis “in consequence of overwork” is finally utilized in defiance of the voice of the patient’s own critical conscience, and in the face of the environment, as the occasion for an “honorable withdrawal.” One speaks in such cases of a “fugue” or “flight into illness.” Especially in the case of the so-called “occupational cramps” (writer’s cramp, pianist’s cramp, violinist’s cramp, etc.) such situations of psychic conflict are always found to be operative, as essential co-determinant causes, beside the factor of over-exertion, if the anamnesis is investigated. In all such cases one will finally discover that the part played by the over-exertion was rather that of an *agent provocateur*: One can (unconsciously determine to) over-exert oneself in order to be ill.

But we do not mean, by these arguments, to deny that there are also genuine exhaustion-neuroses in the sense of Beard’s etiology. We have something more to say about this form of “actual neurosis” in the fifth lecture. Undoubtedly such cases occur often enough under unfavorable social conditions, when for long periods people who are insufficiently (or improperly) fed, enjoy too little sleep, and lack opportunities for rest and recreation, are exploited and over-worked to the point of exhaustion, whether under the compulsion of sheer necessity, or by the threat of external violence; until at last they break down completely. But such genuine exhaustion-neuroses are certainly not so frequent as would appear from the medical diagnoses, and in any case are very much rarer than the lay public imagines. Moreover, unless there is some constitutional organic in-

feriority, or unless the patient has entered upon an irreversible vicious circle, there is usually a favorable prognosis in such cases (as against the genuine, constitutional neurasthenia, which generally ends by becoming chronic, and is highly refractory to suggestion). By means of rest, cautious feeding-up, and tonics (in such cases of undoubted benefit) the acute state of exhaustion can in most cases be quickly alleviated, and the former condition of sthenia re-established. Further, it must be admitted that acute or chronic states of exhaustion naturally reduce the psychic powers of resistance, so that latent psychic conflicts which could formerly be resolved are now too much for the patient, and may result in the sudden onset of a psychoneurosis. In such cases, indeed, one may say that the psychoneurosis is provoked by the acute exhaustion-neurasthenia—in the sense that it was transferred from the former latent, and (so to speak) “compensated” state to the manifest condition. But, as we see, this cannot occur unless a latent neurosis already exists. The physical exhaustion is not the specific cause of the psychoneurotic outbreak; it merely plays the part of an accessory exciting cause.

4. The situation is much the same in respect of the psychoneuroses provoked by infectious diseases and toxemias. Such outbreaks are frequently observed—and even more frequently they are incorrectly diagnosed. In particular, many patients will refer to an attack of influenza from which they suffered perhaps years ago, as the “cause” of a hysteria, a phobia, or an obsessional neurosis of many years’ standing. Or “intestinal poisoning,” resulting from the putrefaction of ordinary foodstuffs, or a too luxurious diet; or “brain influenza”; or a “meningitis” which some doctor is said to have diagnosed at some time or other; or even rheumatic affections may be cited as the cause of a “nervous breakdown.” So much indeed is true, that an infection or a toxemia does reduce the psychic powers of resistance, so that it may provoke ephemeral neurastheniform (vegetative-neurotic) symptoms and conditions, and that on the ground thus prepared the powers of the unconscious meet with less resistance than they would in the case of an intact vegetative-nervous system; so that under these favorable conditions they may be able to overpower the debilitated ego. Nevertheless, we must consider this: that attacks of anxiety, or even protracted states of anxiety, such as commonly appear from time to time in the course of any psychoneu-

rosis, are, with disconcerting frequency, wrongly diagnosed; that is, they are not consciously experienced (either then, or later on) as anxiety, but are described as organic conditions; especially as "spasms of the heart," "asthma," "attacks of faintness," etc. The neurologist has therefore every excuse for being extremely critical in his evaluation of any such anamnestic data.

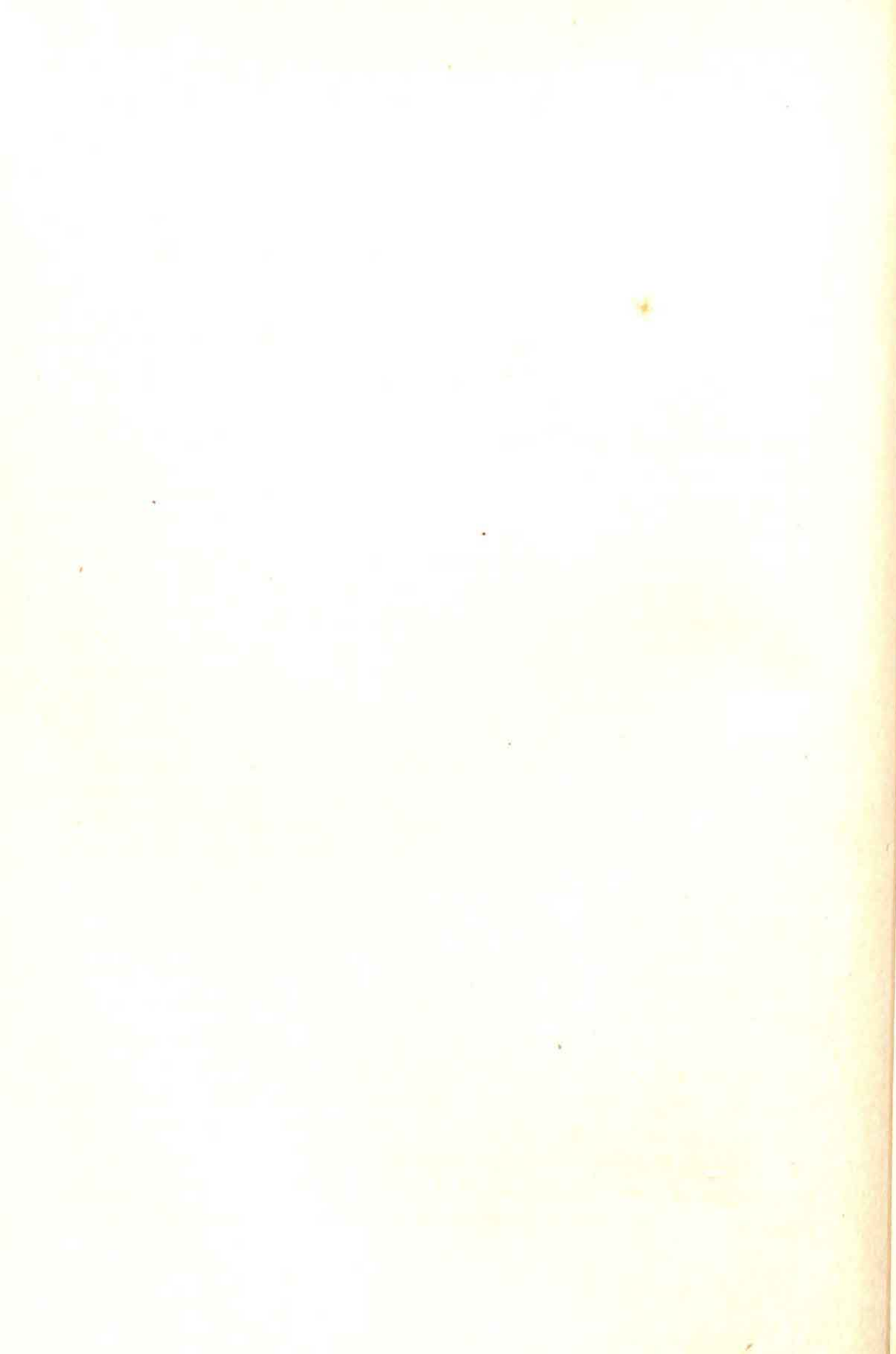
5. Lastly, we must take into consideration the very general opinion, that grief and worry, and especially economic distress, financial loss, etc. may play an essential if not the principal part in the etiology of the psychoneuroses. This opinion, which is shared by the majority of physicians, has naturally much to be said for it; theoretically, indeed, it is supported by the circumstance that here at least we are dealing with purely psychic factors, as against the purely somatic "causes" of which we have been speaking. And yet—paradoxical though this may seem at the first glance—these everyday psychic factors, at all events in the psychoneuroses, can hardly ever be accepted as the exclusive operative causes, but only—in most cases—as accessory causes, in the sense that they bring about a psychic disposition which favors the outbreak or development of the neurosis. For after all, grief and worry in respect of our material existence are part of the normal life of every civilized person, so that there are few indeed who never experience them. At the same time, it must not be forgotten that the individual's claims in respect of his standard of life are extremely variable, differing from case to case; what to one person would seem a barely imaginable descent into poverty and need would seem to another the ideal of a comfortable and assured existence. For example, if a wealthy banker who has been accustomed to handle hundreds of millions shoots himself or jumps out of an aeroplane because he has lost the greater part of his fortune, while what actually remains of that fortune would assure a middle-class *rentier* of a comfortable existence—apparently such a suicide cannot be explained by material privation. It is a surprising fact that suicide on account of financial loss is hardly ever committed by persons of small or moderate means, and that among the wealthy there are very few suicides of young men. This goes to show that factors of quite a different kind are decisive: despair over the loss of the power hitherto enjoyed; dread of the anticipated social scandal and exile, and all the accompanying troubles. And here it must not

be forgotten that the remoter background of the struggle for power and influence is hardly ever to be sought merely in the enhanced material enjoyment of life which wealth can procure, but that in the last resort, in the unconscious, financial power is equated with genital potency, so that the loss of the one often leads to the loss of the other. But a chapter might be written on this point alone; so here we must confine ourselves to these few hints. Yet at least one further aspect of the matter may be indicated: every suicide can be understood as the direction of sadistic impulses of hatred and revenge against the ego. It is not only an act of self-punishment, but the backwash of impotent feelings of hatred which could not be vented on the enemy; so that Freud was perhaps not far wrong when he said that no one kills himself who has not first, at some time, cherished the wish or the intention to kill another.

PART II

I. SOMATO-PSYCHIC RELATIONS AND THE NEUROSES

II. THE THEORY OF INSTINCTS



A. THE ORGANIC FACTORS IN THE ETIOLOGY AND SYMPTOMATOLOGY OF THE NEUROSES

Fourth Lecture

(1) The Internal Secretion and the Neuroses

Ladies and Gentlemen:

As we know, during the last few decades—and of course to a great extent under the tremendous impact of the discoveries of Sigmund Freud and his pupils—the conviction has been steadily gaining ground among clinicians that in the neuroses we are dealing with “functional” disorders, which are not explained by any sort of structural lesions of the brain, but whose etiology is purely “psychogenic.” Nevertheless, a certain proportion of the clinicians and physiologists have never quite abandoned the hope that it might some day be possible to show, under the microscope, that even in the psychoneuroses there are material changes in the central nervous organs. Such efforts to prove that even the neuroses have an organic basis, and that they may after all be included among the organic disorders, have recently been resumed, with varying degrees of success; and whatever one may think of the theories underlying these efforts, they have at all events led to some very interesting results; moreover, they have indicated new points of view, and have opened up new paths of inquiry, which are deserving of thorough consideration and critical discussion within the framework of a general theory of the neuroses.

The fundamental ideas from which representatives of the “organic” etiology proceed in their investigations are more or less as follows. The expression coined by Ch. Dubois—psychoneurosis—does not necessarily of itself imply a psychogenic etiology of the psychopathological phenomena in question; it implies, in the first place, only that in the symptoms of these affections we are dealing with reactions on the part of the psyche, the “organ of the soul.” But the psyche can of course be sympathetically affected by all sorts of organic processes, in a secondary manner, as an effector organ; for example,

by toxic affections of the cerebral cortex (think of the psychic symptoms of ordinary alcoholic intoxication!), by endocrine disorders, by pathological processes in the region of the extrapyramidal centers, and in that of the vegetative centers of the diencephalon which constitute the central workshop of the movements of affective expression and the affective reflexes of the vegetative nervous system. In all these cases the resulting "psychoneurotic" symptoms are not "psychogenic" in the sense of a primary psychic causation, but are evidently, primarily, organically determined.

At the same time, it is admitted even by the extremest champion of a primary organic etiology of the psychoneurotic disorders that the neurotic symptoms are distinguished, not only clinically, but also in a pathophysiological sense, from the much graver organo-psychic disorders, such as are observed in the more serious structural lesions of the brain (for example, in progressive paralysis, senile dementia, tumors of the frontal lobes, etc.). In the case of the neuroses (and in this they are distinguished from these graver organo-psychic defects) we are not dealing with actual phenomena of dissolution, as defined by Hughlings Jackson and von Monakow, but with more delicate and to a great extent reversible pathophysiological processes of a predominantly biological nature, whose morphological bases consist not so much of the cerebrospinal (animal) nerve-centers as of changes in the accessory apparatus of the brain, that is, in the endocrine and vegetative system, and its representative centers, and in the chemical filter-apparatus of the brain.¹ However, in modern scientific literature we find, in the main, that there are three different "organic" theories of the neuroses, which approach the problem from three

¹ The processes here mentioned were enumerated with exhaustive completeness by M. Minkowski (Schweiz. med. Wschr. 1930). We are dealing, says this author, with "passing disturbances of a biophysical, biochemical, secretory and humoral nature—and in the neurological province especially with the subtler reversible changes in the internal condition of the nervous parenchyma and the neuroglia, and functional (osmotic, colloidal and other similar) alterations of dividing membranes; with the subtler disturbances in the activities of elements of the hemo-encephalic or meso-ectodermal barriers, in the internal-secretory activity of the plexus chorioidei, the ependyma, and the neuroglia; and in the circulation of the cerebrospinal fluid, the premotor innervation of the cerebral arteries, etc.,—disturbances on which von Monakow and his disciples have recently (in agreement with numerous experimental and histological works by other authors) laid particular stress, and in which, together with other phenomena, they perceive the physiopathological basis of the neuroses."

entirely different directions, although they complete one another at essential points. They are:

1. a neurobiochemical (endocrine-vegetative) theory,
2. a neuropathological (extrapyramidal) theory, and
3. a reflexological theory of the neuroses.²

INTERNAL SECRETION AND NEUROSIS AND VON MONAKOW'S "PLEXUS THEORY"

All the plausible theories of the neuroses proceed from the long familiar facts that the chemical secretory products of the endocrine glands—the hormones—almost all exert a more or less stimulatory or inhibitory influence on the nervous system, and in particular on the vegetative system, and that these effects are extended, above all, to the instinctive and affective life—that is, to precisely those biological functions which appear to be most disordered in the neuroses. We know today that the primary awakening of the instincts (at least, in the vertebrates, and presumably also in the invertebrates) is effected exclusively by means of the hormones, inasmuch as in the continued absence of the specific hormone not only is there no such arousing (ecphoria) of the instinct in question, but under such circumstances even the morphogenesis of the immediate executive organs of the said instinct remains in the embryonic stage. It seems therefore only natural to refer the neurotic disturbances of the instincts to primary disorders of the internal secretions, and the pathophysiological processes in the sphere of the protective accessory apparatus of the brain connected with such disorders.

The modern theory of the internal secretions owes its beginnings, as we know, to Brown-Séquard, who was the first to demonstrate, in a celebrated experiment on his own person, the vitalizing and rejuvenating effect of a testicular extract on the aging organism, and who, as long ago as 1869, expressed the opinion in his lectures that all the glands, whether or not they possess external ducts, supply useful and even vitally necessary substances to the blood; these substances produce intensive effects in remote organs, and their absence might give rise to pathological symptoms of deficiency. What was essentially new in this way of regarding the subject was the emphasis laid on the fact that in addition to

² By intention, no distinction is made here between actual neuroses and psychoneuroses, since the theories in question do not make any such distinction; on the contrary, they expressly claim that they hold good for both groups of nervous disorders.

the already known nervous correlation of the organic functions there was also a chemical correlation of association of the various parts of the organism, which—in the first instance eluding the nervous system—operates directly by way of the blood. Chemical correlation, therefore, would still be acting when the organ under examination has previously been deprived of all nervous connections. Bayliss and Starling gave the substances which, as it were, play the part of “chemical messengers” between the various organs, the name of hormones (from the Greek, “hormao, I excite, provoke, instigate.”) The genuine hormones, which are bound up with colloidal substances, produce, even in the minutest doses (a millionth of a gramme and less!), intensive excitatory or inhibitory effects. Schäfer proposed to distinguish between those internal secretory products which exert an inhibitory influence on certain organic activities or nerve-centers as chalones (from the Greek *chalao*, I slacken, relax), and the hormones properly so-called,³ but it was afterwards found that such a distinction was impracticable, since it appeared that almost every hormone simultaneously exerts an excitatory influence on certain organs or nervous apparatus, and an inhibitory influence on others. The phylogenetic development of the chemical correlations resulted, according to Starling, not through the production of specific substances which then produced certain effects in the organism, but through the circumstances that certain organs, in the course of time, acquired a special susceptibility in respect of the normal products of certain other distant organs. In this way, and only in respect of the organs which had become oversusceptible to them, did the products of metabolism in question become “hormones.”

The hormones, however, do not merely influence the functions of the organs which are specifically attuned to them in the mature organism, but many of them (perhaps all?) exercise a regulating influence, now stimulating, now inhibitory, on the development, the morphogenesis, of the various bodily organs and organic systems. Such morphogenetically active hormones are described by Gley as harmozones (from the Greek *harmozo* = to rule). A few examples of such harmozonic influences: Leo Adler demonstrated that tadpoles, if the hypophysis cerebri was extirpated, did not develop to maturity, but remained all their lives in the tadpole stage; also their sexual glands remained embryonic. The hypophysis therefore contains a harmozone, which provokes metamorphosis of the animal. On the other hand, if the pineal gland is destroyed in early childhood (by a tumor) the result is a *pubertas praecox*, an abnormally premature sexual maturity. The pineal gland therefore contains a substance inhibiting development—a *chalon*, in Schäfer's terminology, which delays sexual maturity. On the other hand, the early extirpation of the thymus gland leads merely to a general cessation of growth, while puberty develops normally. Every layman is familiar with the influence of the sexual hormone, and with the fact that after castration in early childhood sexual maturity, puberty, and the awakening of the sexual instincts do not occur. On the basis of these interesting harmozonic effects an entirely new conception of the constitutional problems was developed: the conception that not only the whole bodily constitution develops under the constant influence of the endocrine system, but that even after the conclusion of bodily development it remains permanently under the controlling and reg-

³ Schäfer afterwards comprised the excitatory and the inhibitory hormones under the common designation of autacoids (“self-renewed”).

ulating influence of this system (Hart). The correctness of this statement is demonstrated by Steinach's experiments; he was able artificially to "feminize" castrated male rats by the subsequent implantation of the female sex glands; to such an extent that not only did they develop almost all secondary sexual characters of the female, including the genuine secretion of milk, but even the instincts of the opposite sex made their appearance; i.e. they behaved henceforth in a psychosexual respect like actual females, offering themselves to normal males, and giving suck to newly born young, etc. On the other hand, by castrating female rats and subsequently implanting the testicles of a male rat in a state of rut he was able to provoke the complete "masculinization" of these former females. After cutting off the external secretion of the generative portions of the testicles by ligaturing the spermatic cord (Steinach's operation) in animals which were already senile and impotent, Steinach claims that he has always observed an appreciable revival of the general vital powers and the sexual potency of the individuals thus treated—in short, a striking rejuvenation. These are results which he thought to attribute to a hyperplasia of the interstitial (Leidig's) cells (the so-called "puberty glands," which according to Steinach have only an internal-secretory function), whereas the generative part of the testicle, with Sertoli's glands, exhibits a marked atrophy after the operation. (For further details regarding these interesting experiments see A. Lipschütz.)

The physiological impact of the hormonal influences may occur in various different ways:

a) The hormones, inasmuch as they reach the various organs by way of the bloodstream, are able to produce immediate and far-reaching changes in the cellular chemistry of the organs which are oversusceptible to them (purely hormonal correlation, Biedl). Above all, these changes include the above-mentioned harmozon effects, which, as we have seen, depend in part on pluriglandular reciprocal influences; that is, on the fact that a whole number of these morphogenetic hormones regularly exert their influence on the function of certain other endocrine glands.

b) Many hormones, however, have systematic relations with definite sections of the nervous system, inasmuch as they provoke specific excitatory or inhibitory effects in the nervous apparatus in question (hormo-neural correlation, Biedl). Of those neuro-endocrine activities, the most important as regards the theory of the neuroses is the *modus operandi* of the sexual hormones and the hormone of the suprarenal capsules, adrenalin.

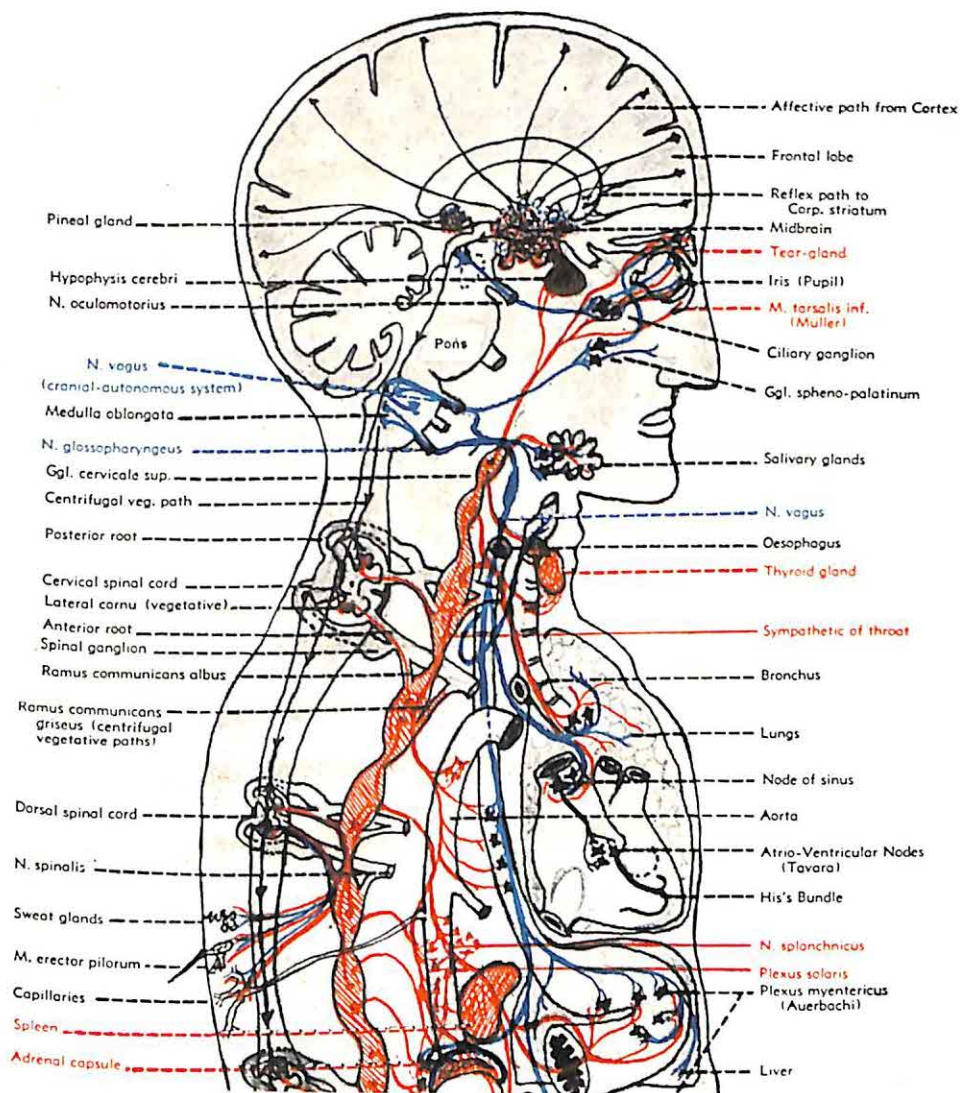
That before and during the normal rut of animals there is a massive discharge of sexual hormones into the blood, a positive flooding of the bloodstream with sexual hormones, may be concluded from the researches of Ancel and Bouin, Tandler and Gross (cf. Lipschütz et al.), according to which the period of heat,

in mammals and birds, is sometimes preceded by the greatly increased volume of the testicles or ovaries; this increase, according to the first-named authors, is mainly if not exclusively due to the interstitial glands, while according to others the generative portion of the sexual glands is at least equally responsible.

The eroticizing effect of the sexual hormones on the central nervous system emerges from the observation that the sexual embracement reflex in the male frog can be provoked only during the rutting period (Steinach 1910). On the other hand, it appears immediately in frogs which are not in heat if they are injected with the testicular fluid of a rutting male. Here we have the remarkable fact that the possibility of provoking a spinal reflex is dependent on the previous stimulation of the reflex center by a particular hormone. But under this condition the reflex exhibits such a high "spinal potency" that it cannot be upset even by the highly injurious stimulation of other parts of the body—for example, brushing a hind leg with acid. Steinach, moreover, was able to show that even the injection of the substance of the brain and spinal cord of rutting frogs makes it possible to provoke a very powerful embracement reflex in frogs which are not in heat: an indication that there is evidently a storing up of the sexual hormone in the central nervous system.

Finally, it is interesting to note that according to Steinach the embracement-reflex in male frogs which are not in heat can be reactivated even without eroticizing the spinal center, by decapitation—evidence that the reflex is latent even in frogs which are not in heat, but is apparently inhibited by the influence of a higher cerebral center. On the other hand, it has now been shown that the internal secretion of the sex glands is controlled by the influence of the nervous system; that is, it can be stimulated or aroused to greater activity by nervous influences of different kinds (mental excitement, lustful thoughts or desires, etc.). This is confirmed by the existence of a parasympathetic (sacral-autonomous) innervation of the sexual glands from the plexus vesicae seminalis. Thus, Steinach has shown that if healthy young male rats, from about the fifth week, are kept in strict isolation from any contact with or perception of female animals, within eight or ten months they suffer from an involution (comparable with eunuchoidism) of their incipient sexual maturity, with the complete extinction of libido and potency, and regression of the psychic and somatic sexual characters. If these artificially produced eunuchoids are now brought into contact with females in heat, so that they scent the latter, a secondary eroticization quickly takes place. Merely through the stimulus administered by the sense of smell all the characteristic and somatic signs of sexual maturity are restored (cf. Meng, *Psyche und Hormon*, p. 27).

In the case of human beings, Stieve was able to show that in criminals sentenced to death the continued agitation and anxiety are accompanied by marked anatomical changes in the gonads, in the sense of cessation of the production of semen and involution of the follicles (cit. W. v. Wyss, 1944, p. 113). These interesting observations, according to Meng, may be extensively generalized. In fact, they furnish us with the key to the astonishing cures which can occasionally be affected by psychotherapy in the most serious cases of so-called "organo-psychoses," such as endogenous emaciation, Simmonds' disease, and other affections of the endocrine system, which have been quite refractory to any physical therapy. In the light of what I have already said, these therapeutic effects could be produced only via the diencephalon-parasympathetic puberty glands.





Further, we know that the principal hormone of the frontal lobe of the hypophysis, the Prolan A, exerts a rapid and powerfully stimulating influence on the ripening of the follicles in the ovaries, and on the ripening of the testicles, and therewith on the production of the corresponding sexual hormones (Aschheim and Zondek, cit. from L. R. Müller). But here there is only a purely chemical correlation.

Adrenalin (Adrenin) is the endocrine secretion-product of the chromaffin cells of the adrenal medulla. In inconceivably small doses it produces intensive and massive effects on the cells and interstitial membranes ("neuroplastic interstitial substance": Asher) of all the organs which are reached from the sympathetic. On the other hand, it does not excite the sympathetic itself, or its nerve endings. However, since the effects of adrenalin in the organs served by the sympathetic are the same as those which arise from the excitation of the sympathetic, the effect of adrenalin is tantamount to an elective sensitization of the sympathetic system, so that one can speak loosely of a homogenous sympathico-adrenal apparatus. The operations of this apparatus are as follows: Dilation of the pupils (excitation of the M. dilatator pupillae), protrusion of the eyeball (Müller's muscle, M. orbitalis), expansion of the eyelids (Mm. tarsalis sup. and inf., Müller); gooseflesh, bristling of the hair (Mm. erectores pilorum) and secretion of sweat; contraction of the small blood-vessels; acceleration of the heartbeats and consequent increase of blood-pressure; inhibition of the smooth musculature of the digestive tract. (In an isolated strip of intestinal muscle this effect, according to Cannon, is distinctly measurable even with the inconceivable dilution of 1:200,000,000, so that intestinal muscle fiber is used as a test-object for the effect of adrenalin.) Inhibition of the secretion of the digestive glands, including the salivary glands (hence dryness of the mouth); inhibition of erection (tumescence) and of sexual excitement; increase of blood-sugar (delivery of glucose from the liver); accelerated circulation of the blood and increase of red corpuscles (through contraction of the unstriated musculature of the spleen); lastly, rapid disappearance of fatigue in the skeletal muscles.

All above effects appear for the time being simultaneously, that is, the whole sympathetic system is excited simultaneously, there is an undifferentiated mass-effect.

It is a fact of great significance that the same results are always produced by certain strong affects: anxiety, rage, anger, and pugnacity are always accompanied by a very intensive sympathetic-innervation, which, as Cannon has demonstrated, is provoked by a massive discharge of adrenalin into the blood-stream. That is, the affect also produces, by way of the sympathetic, an excitation of the chromaffin cells of the adrenals; the resulting adrenalemia evokes a powerful enhancement of the sympathetic-excitation, and this, by a kind of vicious circle, leads to a further increase of the affective sympathetic reflex. It is in this way that one "works oneself up" into a state of anxiety, rage, etc.

However, one further condition, namely the "ionic factor," has to be considered: Recent researches of Kraus and Zondek have established the fact that the efficacy of excitations of the sympathetic (or of adrenalin) depends on the proportional admixture of the sodium, potassium and calcium ions inside the interstitial membranes with which the sympathetic, or adrenalin, comes into contact: For example, if the quotient $\frac{K + Na}{Ca}$ rises above 1, there is an inhibi-

excitability of the sympathetic. This for example, will explain the abnormally increased emotivity in neurasthenia and the anxiety neuroses; that is, the fact that in these "actual neuroses" the slightest affective excitations, which in a normal person would hardly produce any perceptible reflex effects, are able to release disproportionately powerful neuro-vegetative reactions; for example, reactions of a vasomotor character, but also enhanced vegetative reflexes in all the rest of the organs, in so far as they are controlled by the sympathetic. Naturally, the same sort of thing would occur also in the converse case; namely, in a general or partial (that is, confined to individual spheres of innervation) abnormally enhanced irritability of the parasympathetic, and thus in the so-called vagotony.

On the strength of these neuro-endocrine relations, certain clinicians—especially those of the French school—believed that they had already completely solved the whole problem of the neuroses in the organo-physiological sense, and that they could therefore dispense entirely with the psychogenic mechanisms discovered by the psychopathologists as providing an explanation of neurotic symptom formation. For these clinicians hysteria, phobias, and obsessions are no longer psychological problems, but merely, so to speak, the affair of the hypodermic syringe—that is, of a suitable hormone therapy. But these clinicians have forgotten the decisively important fact that the endocrine glands which sensitize the visceral nervous system by the massive effect of their hormones, are by no means independent—autonomous—in their operation; on the contrary, they themselves are first activated by the vegetative nervous system. And the vegetative nervous system, again, receives its stimuli in the first place from the brain, through the subcortical centers, and among these central excitations emotional impulses are by far the most important. According to Cannon, affectivity is the main source of the activity of the endocrine glands. W. v. Wyss, in 1931, gave a description, which is well worth reading, of these psychosomatic connections; a description which, in particular, goes thoroughly into the question of the physical expressions of the emotions and the moods influenced by the general state of the organism. I would refer you further to the comprehensive work of H. F. Dunbar, which contains a critical analysis of the entire relevant literature (2251 items!), and may therefore

be regarded as a standard work on this difficult subject, which is indispensable for every research-worker.

This much must be taken for granted, that disturbances of the endocrine equilibrium need not necessarily be primary, but that derangements of the internal secretions may equally well be of a secondary, psychic causation. The truth of this statement is demonstrated by the long familiar fact that even such grave endocrine disorders as Basedow's disease are not infrequently provoked by violent psychic shock (anxiety, fright). And as regards the genuine psychoneuroses—that is, the hysterias, phobias, and obsessional symptoms—those clinicians who are inclined to refer these nervous disorders exclusively to endocrine disturbances, forget that in these neuroses the vegetative-nervous disorders which are always present are never primary, but that here they are merely the innervatory concomitant reflexes of the primary affective excitations, and therefore always, without exception, have the character of conditioned reflexes. Think, for example, of the painful blush of erythrophobia—that is, the blush of a neurotic suffering from the dread of blushing—and you will at once understand the facts: a neuro-vegetative reaction which is provoked only in definite situations, on the impact of perfectly definite affective complexes, can hardly be dependent on a primary endocrine disturbance; in such cases we can at most accept the hypothesis of a primary endocrine-conditioned disposition as an auxiliary factor.

We see, then, that every theory of the neuroses which is based on the peripheral endocrine-vegetative processes, and ignores the part played by the brain and the affectivity, must of necessity be invalid. On the other hand, the theory of the internal secretions and the reciprocal neuro-vegetative activities requires, merely for the interpretation of the innervation processes which play a part in the production of neurotic symptoms, quite a number of supplementary assumptions. A comprehensive attempt to formulate a satisfactory theory of the genesis of neurotic disorders on a broad biological basis, having due regard for all the facts of cerebral pathology and psychopathology, was undertaken by the eminent specialist in cerebral pathology, C. von Monakow. His theory is of such interest and importance that we are bound to give it thorough examination. But to begin with we must confine ourselves to a consideration of that

part of his patho-physiological theory of the neuroses which may be briefly described as Monakow's "plexus theory." Von Monakow proceeded, quite correctly, from the theory which has been generally accepted since its exposition by Freud, that the neuroses are based on a primary affection of the "world of instincts." The ultimate cause of the nervous disorders must be sought, not in a primary derangement in the sphere of the endocrine glands, but in the brain, since the brain, after all, as the morphological basis of the instincts, first activates the vegetative nervous system and the endocrine glands. The harmoniously balanced central regulation of the total neuro-vegetative life is, of course, under certain circumstances, sensibly deranged by the continued "encroachments of the instinctual interests" of the individual, and the excessively strong and protracted affective excitations emitted thereby. The flooding of the bloodstream with hormones which is thus provoked (through excitation of the vegetative nervous system by the affectivity, via the vegetative brain centers) has, in addition to the immediate effects on the neuro-vegetative end-apparatus of the periphery (enhancement of the relevant and distinctive reflexes), corresponding repercussions on the reactions of the brain, so that a vicious circle is brought into operation. We might compare these central hormonal effects with the effect of certain toxic substances—for example, the narcotic alkaloids, or alcohol.

Now, there are provisions to ensure that under normal conditions the cerebral parenchyma is not directly reached by a temporary flooding of the bloodstream with toxins (even hormones), and therefore cannot be too seriously damaged. For between the bloodstream and the cerebral tissues—that is, ultimately, between the endocrine-vegetative system and the cerebral parenchyma—a protective apparatus is interpolated, which places a barrier in the way of the toxic inundation; a barrier that stops the greater part of the substances which, in excessive quantities, would injure the tissues of the brain, and allows them to reach the supersensitive nerve cells only in the minutest quantities, in *refracta dosi*. This apparatus, which fulfils the function of a chemical filter protecting the brain, has been described by L. Stern as the "hemo-encephalic or ecto-mesodermal barrier," and by others as the "serous filter." According to von Monakow, the following non-nervous elements of the brain are included in its

formation: a) the Plexus chorioidei of the cerebral ventricles;⁴ b) the Tela chorioidea; c) the ependyma; d) the subependymal tissue, and e) the neuroglia. The elements c-e of this barrier, which screens the cerebral parenchyma from the bloodstream and prevents the direct passage of many of the various chemical substances in the same, constitute the so-called "neuroglial screen" of Achucarro.

The existence and the protective functions of the serous filter appear now to be established by a great number of anatomical and histological observations, and also by experiments.

Thus, Goldmann showed, in 1913, that poisonous dye stuffs, which were injected into the bloodstream, were tolerated without injurious effects, in very large doses, by guinea pigs and dogs, whereas the same dye (trypan blue), if injected directly into the subarachnoidal space, even in doses of only one twentieth or one sixtieth of the above amounts, soon led to the death of the animal, with marked symptoms of cerebral irritation and paralysis. The dye stuff injected into the bloodstream left the brain uncolored; on the other hand, all the dye stuff was stored up in the plexus chorioidei—that is, was held back by it. According to Schäfer's and Zanger's researches into the vital function of the membranes, it is highly probable that the blood is able to deliver only oxygen and the neutral mineral salts directly to the brain without any hindrance; the majority of other substances are not allowed to pass freely by the protective neuroglial curtain (between the capillaries and the cerebral substance). However, Stern found that strychnine, morphia and atropine injected into the bloodstream could be detected in the cerebral fluid and in the substance of the brain eighteen to twenty minutes after injection—the strychnine and morphia actually in greater concentration than in the blood. On the other hand, curare did not penetrate the blood serum filter. Even direct injections into the substance of the cerebellum produced no symptoms for several hours; only when the poison had reached the fourth ventricle by diffusion did the animal die within a few minutes, with symptoms of violent cerebral delirium. The same complex of symptoms was developed almost instantly upon the direct injection of the poison into the ventricle (Stern and Rothlin).

Further, it can now be taken as established that circulation of cerebral fluid in the brain does not occur in a random and disorderly fashion, but follows a perfectly definite direction, which under normal conditions is irreversible. Key and Retzius had found that while injections of Berlin blue into the subarachnoidal space reached the perivascular lymphatic spaces by infiltration, the cortex usually remained uncolored: There is presumably a direct connection between the subarachnoidal space and the perivascular spaces of Ranvier and His, but no communication between the latter and the ventricular cavities. Thus, the hemencephalic barrier acts in a way like a valve: that is, when intact, it does not allow substances introduced into the outlet, or draining passages of the fluid, to make their way backwards, i.e., into the ventricle, or at all events, admits them only

⁴ The cerebrospinal fluid is secreted by the epithelial cells of the plexus chorioidei. It does not represent a mere transudate from the bloodserum; which is obvious from the fact (*inter alia*) that it is of an essentially different chemical composition.

in very small quantities and after the lapse of some hours. That this is actually the case is demonstrated by a number of further anatomic and biochemical data. In the first place, C. von Monakow claims to have proved that the ventricular system constitutes a completely closed sinus, which is everywhere hermetically sealed off from the subarachnoidal spaces by the ependyma. According to von Monakow, the communicating orifices of Luschka and Magendie are merely artefacts which do not exist in the intact ventricular system. In the second place, we have the facts established by Cestan, Risier, Laborde (1923), Weigelt, Kafka, Salomon, Wellis, et. al. that both the pressure and the chemical composition of the fluid in the ventricles and in the subarachnoidal spaces are different. For example, according to the first-named French authors, the subarachnoidal fluid contains three times as much albumen and thirty times as many cells as the ventricular fluid, but less sugar—a proof that in the course of its passage through the brain the fluid has discharged its food stuffs but has taken up waste products. From these facts the conclusion may be drawn, that normally the cerebrospinal fluid in the brain circulates only in the direction from the ventricles to the surface. And it is highly probable that it escapes from the ventricles, through minute crevices in the ependyma, into pericellular spaces, thence into His's space, and from this into the subarachnoidal space. From the subarachnoidal spaces (cisternae) the exhausted fluid reaches the nervous plexus of Pachioni's granulations and the venous sinus. A second return path, which however, is followed mainly by corpuscular elements (refuse cells, phagocytes), runs from the pericellular spaces into the Virchow-Robinson (perivascular) spaces, from which the remove cells reach the lymphatic drainage canals and the lymphatic glands (Plate II).

This is von Monakow's description of what occurs. But it be admitted that many objections have been made to his conception of the circulation of the cerebrospinal fluid, especially by Schaltenbrand and Cushing's school of brain surgeons (Dandy, Weeds, Putnam, and Kravenbühl et al.). Their chief criticism is directed against Monakow's assertion that Luschka's and Magendie's apertures were orifices artificially produced, which do not exist in the untouched, youthful brain. This notion is contraverted merely by the fact that it is possible, without preparation, to blow air into the ventricles of the brain from the subarachnoidal spaces, and especially from the cisternae of the cerebellum, and even from the lumbar sac (Encephalography). To this argument, however, writers of the Monakow school retort that the injection of air in lumbar and cisternal encephalography always takes place under a certain pressure, which would be quite capable of rupturing the delicate membranes and so creating artificial communications, and, therefore, the alleged orifices of Luschka and Magendie. Moreover, such surgical experiments (for the purpose of diagnostic X-ray exhibition of the ventricular system) are almost exclusively performed on brains in which pathological changes have already occurred. And finally, even the valid proof that there is a direct communication between ventricle and subarachnoidal space, and a consequent circulation of fluid, would not, of course, exclude the possibility that there might also be an "internal" circulation of fluid from the ventricles through the tissues of the brain. And for this internal flow the mechanism of the blood-serum barriers already described would still possess the same importance. For it is clear that in one way or another the parenchyma of the brain, under physiological conditions, comes into direct contact only with the ventricular fluid, and

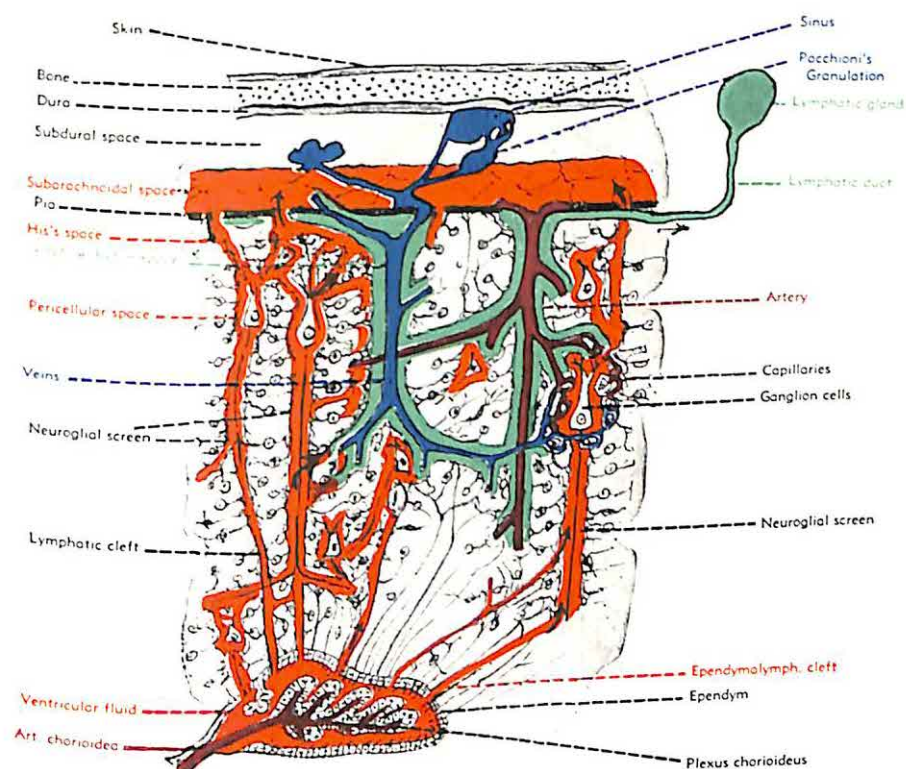


Plate II

Scheme of circulation of cerebral fluid in the brain and the hemoen-
cephalic barrier (according to C. von Monakow)

Black: Neuroglial Screen (Achucarro). *Orange:* Cerebral fluid spaces.
Red: Arteries. *Green:* Lymphatic spaces. *Blue:* Veins. This scheme
shows that the cerebrospinal fluid flows directly around the brain cells,
whereas these are completely shut off from the ducts by the neuroglial
screen (as a semipermeable membrane).



that even for once in a way, under abnormal conditions of the circulation, exhausted fluid from the cisternae (which, according to Monakow's theory has already passed once through the cerebral tissues, and is laden with waste products) should be forced back into the parenchyma by way of the ventricles, the neurological barrier in the brain tissue itself would still exercise its protective function against this fluid laden with waste products. And thus the question whether Luschka's and Magendie's orifices were or were not pre-existent is really of only secondary importance as regards the intracerebral circulation, which is the essential factor in Monakow's "plexus theory," and could not in any case shake the foundations of that theory.

Let us now assume that as the result of pathological processes the blood-serum barrier has become leaky, so that it can no longer completely fulfil its function of protecting the brain—or perhaps cannot perform it at all. What will happen then? It is clear that in such circumstances the brain will be more or less unprotected against the now unchecked invasion of all sorts of toxins, and also of the hormones. Such lesions of the hemo-encephalic barrier might be produced in several different ways:

1. By direct mechanical injury—i.e. by traumata of the skull and brain. In such cases the concussion alone may result in a derangement of the labile vasomotor reflexes which from the vegetative brain centers regulate the activity of the chorioid plexus and the cerebral arteries, and therefore the nourishment of the brain tissue.

There may also, of course, be direct lesions of the pia mater, of the ependyma, of the fine lymphatic ducts of the brain (as recently described), resulting in more or less serious and lasting derangements of the circulation of the cerebral fluid and injuries of the hemo-encephalic barrier (traumatic meningo-vasopathy, traumatic encephalosis). The ensuing results are not merely considerable secondary functional disorders of the central regulation of the vegetative nervous system, which display an extensive similarity to the clinical picture of a serious neurasthenia (traumatic neurasthenia, R. Brun), but also corresponding changes of the affectivity—amounting even to lasting modifications of the character and alterations of the whole personality. These facts are known by everyone who has often had to examine such victims of cerebral traumata and give an official opinion as to their condition. All physicians, and even all laymen, are familiar with the intolerance of alcohol to be observed in persons who have suffered injuries to the brain and with their extreme affective lability, which changes from depressive apathy to the extremest irritability. In the light of Monakow's "plexus theory" we can attribute these symptoms to a traumatically acquired insufficiency of the hemo-encephalic barrier, and the resulting autointoxication of the brain.

2. But similar injuries to the blood serum may be caused by severe infectious maladies and intoxications.

By the constant invasion of bacterial toxins and other poisonous substances inflammatory changes occur in the epithelium of the chorioid plexus and in the perivascular tissue of the neuroglial barrier, with the final result that the barrier is as good as perforated in many places, becomes leaky, and can no longer sufficiently fulfil its protective functions. Clinically, we then have before us more or less serious neurastheniform complexes of symptoms; that is, the syndrome of a postinfective or toxic neurasthenia (in so far as the damage does not amount to actual structural lesions in the substance of the brain, which of course would result in quite other and grave symptoms). That bacterial toxins seriously diminish the resistance of the blood-serum filter to the penetration of certain substances, for which it otherwise represents an absolute barrier, that is, that these toxins (those of diphtheria, tetanus and tuberculosis) bring about an increased permeability of the barrier, with the consequences I have just described—this fact has been experimentally demonstrated beyond a doubt by L. Stern. We therefore cannot be surprised that after recovery from such infectious maladies as influenza and typhus, and also in cases of chronic tuberculosis, a severe neurasthenia so often occurs as a sequel, and even becomes chronic. Further, one is reminded of the neurastheniform symptoms in chronic alcoholism and other toxicoses, and of the neurasthenic syndrome in latent chronic carbon monoxide poisoning. In persons who have died of acute carbon monoxide poisoning (the so-called "garage illness") Dr. Allende-Navarro, a pupil of Monakow's, has been able to prove the existence of grave destructive changes in the chorioid plexus and the whole of the neuroglial barrier. These histopathological conditions were entirely in harmony with Monakow's theory of a circulation of the cerebral fluid from the ventricles to the surface of the brain. They were most marked in the vicinity of the ventricles, while in a peripheral direction, towards the cortex, they became gradually less and less noticeable.

3. But there is also in all probability a third way in which the blood-serum barrier can be damaged, and this third way, remarkable though it may seem at the first glance, is through the psyche. As we have already seen, Monakow compares the effects of a sudden flushing of the brain with certain hormones, which are discharged into the bloodstream in great quantities by powerful affective excitations, with the effects of poisons; for example, with acute alcoholic intoxication. Such affective storms or "affective poisonings," as Monakow called them, are, as experience tells us, always released by painful encroachments on instinctual interests. If such tempestuous overflows of hormones, especially such as occur in acute states of anxiety (Adrenalin!) should take place, in the case of an individual whose disposition makes him particularly susceptible to them, almost daily, and in a long-drawn succession, they may, in the long run, very possibly attack the structure of the hemo-encephalic barrier and so weaken it as to cause at least a material increase of perme-

ability, which, in its turn, will permanently increase the affective lability of the patient, and also his sensitiveness to overloads of his blood-serum filter proceeding from other causes. Clinical symptoms are bound to follow, such as we do actually observe in certain neuroses (as we know, very many neurotics are in fact intolerant of alcohol, and peculiarly incapable of resisting any other kind of poison). That there is some truth in this theory that certain hormones in particular, if they reach the brain in excessive quantities, do actually influence the activity of the hemo-encephalic barrier, is established by the investigations (*inter alia*) of Beilig and Hoff, who demonstrated an increased permeability of the ecto-mesodermal barrier during menstruation, so that the chemism of the cerebral fluid undergoes modification. One now understands why for so many women the period of the menses is also a time of temporarily enhanced affective lability, which may amount to actual psychic derangement! Hauptmann found also, experimenting with bromides, that in postinfective psychoses there is an increased permeability of the hemo-encephalic barrier.

Lastly, in the case of the genuine psychoses, von Monakow and his pupil Kitabayashi found, in a large quantity of dissection material, distinct and often extreme pathologico-anatomical changes in the Plexus chorioidei and the adjacent subependymal regions of the neuroglial barrier—above all in cases of schizophrenia, which, as we know, are distinguished by especially severe affective disturbances. In all the cases examined there was a massive atrophy of the ectodermal glandular cells of the villous surfaces, amounting to complete degeneration, and even to disappearance of the epithelium over large areas. The ventricular ependyma was also degenerate, and in places entirely absent, and the subependymal tissue likewise was more or less seriously affected, the pathological changes decreasing in the direction of the cortex.

But what is primary here, and what is consequence? Science has hitherto assumed—and for sound reasons—that in the genuine psychoses at all events, and probably in the neuroses also, a primary-endogenous disposition plays the decisive part. Anyone who does not possess this disposition can never become psychotic; he will be for all time protected against such a fate. On the basis of certain findings of the research-worker, according to which pathological

changes in certain endocrine glands are always observed in cases of schizophrenia (Mott et al.) one may assert that this disposition will consist in a primarily (constitutionally) conditioned abnormal composition of certain hormones. This pathological combination of hormones will in the course of time attack the chemical (protective) filter of the brain, and this will result in an increasing insufficiency of the filter, and finally in its progressive destruction.

Against this theory, the psychoanalytic school of Freud has always taken into consideration the possibility of a primarily psychogenic etiology of the genuine psychoses—and of course, of the neuroses. In the light of the findings of research-workers of the Monakow school (concerning the action of violent affective shock on the hemencephalic barrier) such a conception does not now seem so implausible as it would have done a little while ago; even in the case of the genuine psychoses, which are of course characterized clinically by serious primary affective disturbances. This view received further support from the examination (by de Allende-Navarro in Monakow's Institute) of the brains of two parrots, both of which, about six months before they were killed, had suffered a severe fright with lasting anxiety affect. One of the birds, in its owner's absence, had been chased about the room for hours on end by a cat; the other, while crossing a lake, had fallen into the water, and had only with difficulty been rescued from drowning. Both these parrots, some time after the psychic trauma, developed severe organic cerebral symptoms with progressive signs of paralysis and epileptic fits. Microscopic examination revealed completely analogous conditions in both cases; namely, severe degenerative changes in the protective filter apparatus of the brain; and again, the destruction was by far the most pronounced in the chorioid plexus and the periventricular regions of the brain, while in the direction of the cortex it was less and less perceptible.

It appears to me that these highly interesting investigations throw quite a new light on the causative conditions which have to be considered in the case of the psychoses; for they seem to show that a destructive process in the ecto-mesodermal barrier, with all its secondary consequences, may under certain circumstances be initiated by psychic influences. At all events, in the light of the above discoveries, the possibility that an acute psychotic attack may be provoked

by some personal experience, that is, may have a psychogenic etiology, seems to be more of a probability. We now understand how it may happen that a terrifying event (an accident), protracted anxiety, worry, etc. may provoke serious and progressive affections of the brain; for example, a paralysis agitans (Parkinson's disease), since in this disorder the periventricular regions of the brain are predominantly affected. At the same time, it must not be forgotten that the centers of the vegetative nervous system lie in these regions of the brain—the centers from which the vegetative reflexes to affective excitations proceed (for example, the dorsal vagus nucleus on the floor of the fourth ventricle, the pupillary nucleus of the oculo-motor nerve on the floor of the third ventricle, the vegetative centers of medial thalamic region, and the regio hypothalamica). This fact explains why in the case of the insufficiency (leakiness) of the ectomesodermal barrier vegetative and affective disorders promptly make their appearance: for the pathological discharges of hormones or other toxins have first to pass the plexus chorioidei in order to reach the circulation of cerebrospinal fluid; so the results of damage inflicted upon the chemical filter of the brain will appear first of all in the regions adjoining the ventricles, and therefore express themselves through the periventricular nerve centers which are mainly the vegetative brain centers. But once there is an insufficiency of the barrier—whether temporary or permanent—once the toxins have broken through into the ventricular system, the inundation of the vegetative centers—after the fashion of a vicious circle—must provoke a further catastrophic increase of the pathological affective reactions—a fact that we had already been able to establish in our observation of an acute attack of anxiety.

But where did our discourse lead us? At the beginning of this lecture we proposed to outline the arguments in favor of an organic theory of the psychoneuroses—and now, after we seemed to have succeeded only too well in our design, after we thought we had discovered, in the reciprocal actions of the internal secretions and the hemo-encephalic barrier, what may be called the morphological basis of the neuroses, we had to realize that this instrument had unexpectedly turned itself against our original intention! For in complete contradiction of this original intention, our rather tedious investigation of the pathophysiological and morphological data points to the

possibility of a primary psychogenic origin of organic brain affections, and even of such genuine psychoses as schizophrenia. If this view seems a little startling to some, they may console themselves with the realization that one weighty objection can be brought against this theoretical possibility; an objection which will at least compel the "psychogenics" to go cautiously. The objection is this: It can hardly be assumed that assaults upon the sphere of the instincts or impulses, even though they might lead to the most violent affective explosions, and inundate the bloodstream with adrenalin, would provoke, in a perfectly healthy brain, with an intact vascular system, a permanent insufficiency of the hemo-encephalic barrier, not to speak of an irreversible destruction of this protective apparatus. Before affects with which a normal brain is accustomed to deal could provoke such deleterious effects there would certainly have to be a pre-existing morphological disposition. In the case of Parkinson's disease—and perhaps also in the case of Allende's parrots—one might look for this disposition in senile arteriosclerotic changes in the brain. But in the genuine psychoses also, and even in severe neuroses, one must perhaps assume the existence of a congenital predisposition. Von Monakow saw this predisposition in a congenital constitutional insufficiency of the hemo-encephalic barrier, which in the psychoses (together with other constitutional and hereditary dispositions) is extreme, but is less marked in the neuroses. As a matter of fact, there is no real opposition between the two ways of considering the problem—between the theory of the intravital insufficiency of the chemical filter resulting from the influence of affects, and the theory of a constitutional insufficiency. The two theories are mutually compatible, and actually supplement each other. In order to understand this you have only to recall what we said concerning the vicious circle in connection with the leaking of the hemo-encephalic barrier. It is, after all, obvious that if there should be a primary insufficiency of the barrier such a vicious circle can establish itself with the greatest ease; inasmuch as the toxins can get to work without—or almost without—the preliminaries of a gradual arrosion and final penetration of the protective filter; so that they can begin at once to act on nervous tissues which in the case of an undamaged barrier they could have reached only after a siege of months.

Finally, let us ask ourselves what von Monakow's "plexus theory" can do in the way of explaining the neuroses. A theory which claims to be a general theory of the neuroses evidently ought to be able to explain not only the etiology, but also the ontology—that is, the nature and the occurrence of the symptoms—that is, the symptomatology—and this for all the various forms of the neuroses; and in so doing it should not only give a technical explanation of the innervation of the neuroses, but should also make them intelligible from the causal-genetic standpoint.

Now, it is an unquestionable fact that the plexus theory, as applied to the so-called "actual neuroses," does completely satisfy our requirements in respect of causality, for not only does it completely explain the origin of these affections—that is, of neurasthenia and the anxiety neuroses and "fright neuroses"—but it also explains their symptoms. Think, for example, of the clinical picture of a toxic neurasthenia. I truly do not know of any other theory which could better assist our understanding of the nature, origin, and symptoms of such an affection.

But it is different in the case of the psychoneuroses. Here, it seems to me, Monakow's theory cannot do much more than provide the hitherto somewhat mystical conception of the "constitutional predisposition" with a solid, biological, i.e. morpho-physiological basis. But here even this biological basis, as we shall see, does not entirely suffice to explain the phenomena in question. What it cannot explain, for example, is how it should come about that on the basis of this predisposition (primary insufficiency of the hemo-encephalic barrier) in one case a hysteria develops, and in another case quite a different form of neurosis, or perhaps a phobia or an obsessional neurosis. In other words: as regards the special problem of the causes of the "choice of neurosis" (Freud) the plexus theory is evidently inadequate; it requires supplementing by the assumption of further constitutional factors as operative causes. We shall study these additional factors more closely in a later lecture, in the form of the instinctual constitution.

But even as an explanation of the special formation of symptoms in the individual neuroses, the plexus theory is in my opinion inadequate. To be sure, it can explain certain fundamental disorders which we observe in the psychoneuroses, and which here, as in the

actual neuroses and the psychoses, we must attribute to primary constitutional anomalies. On the other hand, it cannot explain the individual symptoms—such as the conversion symptoms of the hysterias, or the phobias, or obsessional ideas—as regards their special content, or as regards their occurrence. Not, indeed, because these are purely individual manifestations—that is, phenomena which quite obviously have the character of individually acquired psychic peculiarities, or which are even strictly localized in perfectly definite parts of the body, like the conversion symptoms of hysteria: It is, indeed, difficult to conceive how a pathophysiological factor whose action on the brain as a whole is so diffuse as a general insufficiency of the hemo-encephalic barrier could give rise, for example, to a symptom so sharply localized as a hysterical paralysis of the arm; or the obsessional idea that something would happen to one's mother if one did not perform certain definite ceremonies before going to bed. It should be obvious without further investigation that in the formation of symptoms having such content and assuming such forms individual experiences play the decisive role, and that even the psychic mechanisms through which these symptoms take shape and finally emerge can only originate in the sphere of individual experience; that is, they must be of an individual and psychic nature.

It is, however, conceivable and even probable that the primary, innate weakness of the chemical filter of the brain assumed by von Monakow may be partly responsible, as providing a morpho-physiological basis or disposition for those general psychic fundamental disorders, which as we have just said must probably be admitted in the case of the hysterias, phobias, and obsessional neuroses. In other words: here, as in the case of the psychoses, we must apparently distinguish between the psychic and primary disorders of a constitutional nature and the secondary symptoms, and as we have been accustomed to describe these latter as "the content of the psychosis," we shall do well, in the case of the psychoneuroses also, to distinguish clearly between "the content of the neurosis" and the constitutionally conditioned basic disorders. Many of the current misunderstandings between the various writers on the general theory of the neuroses could be avoided if this fundamental difference were always clearly recognized.

As for the fundamental disorders to which reference has been

made: evidently these consist mainly of abnormal forms of excitation and abnormal responses. For example, in hysteria, there may be an abnormally enhanced auto- and heterosuggestibility, combined with an exaggerated readiness to repulse and veil and finally repress all painful impressions, and also an increased tendency to allow certain defensive movements (fright reflexes) and attitudes to become fixed; and, in general, an enhanced faculty of affect-displacement, and hence that peculiar transformation of affects in the innervation of the body which we describe as conversion. Loewenstein detected, as a characteristic sign of the hysterical constitution, an abnormally long duration of the visceral reflexes provoked by affective excitations; for instance, the pupillary reflex (tendency to pupillotomy). Here, at last, Janet's theory of the "primary incapacity for psychic synthesis" as the fundamental disorder in the hysterias and the rest of the psychoneuroses takes its rightful place. In the obsessional neuroses, on the other hand, we are evidently dealing with a primary, exaggerated ambivalence of all emotions; so that every emotional excitation that arises is accompanied by an equally strong counter-emotion. An amorous impulse, for example, is accompanied at once by an antagonistic impulse of hatred which cannot be suppressed; and this inability is accompanied, according to von Monakow, by the failure of reciprocal inhibition in the psychic sphere. Thus, a pathological over-conscientiousness may occur as a reaction against an exaggerated primary sadism. In order to avoid misunderstanding it must here be expressly emphasized that all the above-mentioned psycho-neurotic "basis disorders" have in themselves the character of latent dispositions which lead to manifest symptom formation only when the patient finds himself in situations marked by serious conflict. Further, the disposition can be made ineffective by suitable pedagogic methods and psychotherapy.

In conclusion, it may be said that while von Monakow's "plexus theory" may partly explain the emergence of the psychic, primary or basic disorders in the psychoneuroses, it fails in its attempt to explain the content of the neuroses, the special manifestations of those basic disorders. Evidently this fact did not escape von Monakow himself, for since then, in his biological conception of the neuroses, he has attributed great importance to the historical factor (experience), and in his latest writings he has made increasing con-

cessions to Freud's discoveries as to the definite connection between experience and symptom. So, after all, we find ourselves referred back to psychology, and we are forced to admit that every attempt to construct a consistently biological doctrine of the neuroses exclusively on the basis of an organic (pathophysiological) theory is bound at the very outset to come to grief on this particular point.

Finally, a word as to the practical consequence of the "plexus theory." The recent discoveries concerning the pathology of the hemo-encephalic barrier are of course of importance as regards the prophylaxis of the neuroses—and also mental hygiene. As we all know, cardiac sufferers and their relatives are always admonished by the doctors to do their utmost to avoid excitement, and this very properly, since any extreme mental excitement may harm the patient, owing to the accompanying acute increase of blood pressure (the effect of adrenalin!), and may easily lead to cardiac failure or a cerebral hemorrhage. In the light of what you have just learned of the effects of extreme and protracted emotional agitation on the blood-serum filter and its further consequences, it will be obvious that the same precaution should be taken as a measure of protection against the neuroses. The question is—in both cases—how this requirement can be realized in practice; for, after all, we cannot wrap a human being in cotton-wool and put him under a glass case in order to protect him from any sort of excitement! Nevertheless, a good deal can be effected, with the help of the medical profession, by private and public enlightenment as to the nature and pathology of the neuroses. For example, if he were warned of the danger of extreme and protracted emotional distress, many a psychically labile person, disposed to neurosis by vegetative stigmata, or constitutional or inherited defects, if he found himself suffering from severe attacks of anxiety, or involved in some painful mental conflict, which he felt was more than he could deal with, might confide, before it was too late, in some understanding friend, or seek the advice of a neurologist, instead of retiring into his shell with his spiritual distress, and pining away in solitude.

Fifth Lecture

The Actual or Vegetative Neuroses

Ladies and Gentlemen:

In the last lecture we thoroughly discussed the relations between internal secretion and the vegetative nervous system on the one hand, and the neuroses on the other. You have heard that there is actually a group of functional neuroses which in their symptomatology and their pathogenesis can very well be explained on a purely biochemical (endocrine-toxic) and neuro-vegetative basis. These are the so-called "actual" or vegetative neuroses, i.e. neurasthenia, anxiety neuroses, and fright neurosis. It was Sigmund Freud who first grouped these nervous disorders together under the description of "actual neuroses," thereby distinguishing them sharply from the genuine psychoneuroses (or "transference-neuroses," as he then called them). What induced Freud to group these neuroses together and distinguish them from the psychoneuroses properly so called was the realization that the "actual" neuroses have a common, characteristic pathogenesis, a pathogenesis entirely different from that of the psychoneuroses in the narrower sense of the term. When he endeavored to deal with the "actual" neuroses by means of his psychoanalytical therapy, he was soon obliged to admit that this therapy, which had been so successfully applied to the severest cases of hysterical and obsessional affections, until then regarded as incurable, was substantially ineffective in the case of neurasthenia and anxiety neuroses; also, in these disorders he failed to detect all the intricate mechanisms of repression, transference, and conversion of affects into physical symptoms, etc., which play so important a part in the genuine psychoneuroses. At all events, this applies to the basic symptoms of the "actual" neuroses; they really do not appear to be psychically determined; they have no psychological content, or, to put it more accurately, no psychological significance; they are not, like hysteria, the phobias, and anxiety neurosis, to be explained by

the subterranean burrowings of repressed instincts. For example, it was useless to begin by inquiring into the secret meaning of the various nervous cardiac disorders, such as rapid pulse or extra systoles, etc., or of a nervous dyspepsia, or even an acute attack of anxiety; that is, it was useless to attempt to discover what unconscious instinctual wishes had condensed themselves in such symptoms and were achieving symbolical expression in them. In a word, the primary pathological factor in the symptom formation of the "actual" neuroses is not psychogenic but somatogenic—somatogenic in so far as according to Freud both the neurasthenic and the anxiety-neurotic symptoms occur on the basis of a toxic influence. In short, in such cases we are dealing with toxic disorders of functioning in certain sections of the vegetative nervous system, disorders which find immediate expression in the organs in question—that is, in the heart, the stomach, the bowel, etc., but also under certain circumstances in the psyche. Thus, in principle it is much as if a paralysis of the bowel were to occur as the immediate consequence of atropine poisoning, or as if retardation of the pulse and extrasystoles were to result from the chronic effect of digitalis. These facts were often insufficiently realized by the lay public, and even by certain lay analysts; cases were indiscriminatingly and impetuously "analyzed" and "interpreted" when in reality there was nothing whatever to analyze, so that psychoanalysis was discredited as a science in the eyes of the medical profession.

Here, of course, one could make the obvious objection that reflex disorders in the sphere of the vegetative nervous system, such as evidently lie at the root of the "actual" neuroses (which are therefore described, in the hospitals, as vegetative neuroses) are actually observed as the consequence of affective influences; moreover, that the neurasthenic cardiac and gastric symptoms, and still more the anxiety neuroses, may also be due to the influence of excessively strong affects, and therefore may be, after all, fundamentally psychogenic. This seems to be confirmed by the immediate observation of neurasthenics, for these patients, in particular, are distinguished by an exaggerated appetite for every kind of psychic stimulus and by an excessive affective lability; a great part of their so-called "irritable weakness" is due to this very peculiarity. This is even more evident

in the case of the anxiety neuroses, whose cardinal symptom, anxiety, must impress every layman as purely psychic.

But this criticism is easily countered if we clearly understand that there are obviously two different kinds of psychogenesis of symptoms:

a) A form in which the psyche merely brings about the release of a physiological reflex process in the vegetative nervous system, but has from now on no further influence of any kind on its formation;

b) A psychogenesis in the narrower sense of a "complex-conditioning," whereby psychic processes of an unconscious character not only provoke the symptoms, but also help to determine the choice and even the details of the symptoms.

The first-named form of psychogenesis is operative even in the actual neuroses, if, for example, by continued and violent affective excitations the permeability of the hemo-encephalic barrier is increased by the effect of hormones, so that finally a neurasthenic symptom complex is evoked; whereas the latter form (psychogenesis in the narrower sense of the term) is responsible for the formation of a hysterical, phobic or obsessional-neurotic syndrome.

On the other hand, we see that even in an already existing neurasthenia or anxiety neurosis all affects have an unusually powerful effect on the vegetative nervous system of these patients, and excite pathologically intensified organic reflexes. But this intensified affective excitability is not the cause, but is itself only a symptom of the actual neuroses; it is merely a partial manifestation of the generally intensified readiness to react of the vegetative nervous system, which in the "actual-neurotic" is in a state of toxic sensitization. This is why every stimulus that affects the vegetative nervous system of the patient—even every affective excitation—provokes a correspondingly intensified response—an increased amplitude—in the vegetative reflex apparatus and its effector organs—that is, in the endocrine glands. This response results in the formation of the vicious circle of which we spoke in the last lecture; the continued hormonal assault upon the hemo-encephalic barrier results in the increased permeability of this protective chemical filter, so that finally the vegetative brain centers themselves—the reflex centers of the affectivity—suffer from the same condition of toxic sensitization as the peripheral end-apparatus of the vegetative system.

Thus, in all these instances the psyche is not the primary symptom-

forming agent, but merely the symptom-evoking agent, and often, even, only the secondary, participating agent; that is, it may be concerned in the production of the primary symptoms of actual neurosis merely as a physiological motor, or it is itself merely an "effector organ," just as the heart, bowel, bladder, etc. are effector organs of the neuro-vegetative stimuli. And the pathologically intensified vegetative reflexes which are thus provoked are merely the expression of the actual affective excitations operating in the immediate present, but not the consequence of an instinctual conflict rooting and working in the deeper levels of past psychic experience, as in the psychoneuroses: They are thus psychogenic merely in the technical sense of their innervation, but not in the sense of a psychic causality, such as we find them in the conversion symptoms of hysteria. They are the immediate expression of the actual affective impulse itself, which here takes a particularly violent form on account of the primarily enhanced affective lability which is a basic symptom of every actual neurosis.

We were speaking a little while ago of the toxic overexcitability of the vegetative nervous system in the actual neuroses. It is clear, however, that neurasthenic symptoms of a special kind can be produced also by the contrary state of affairs—that is, by a diminished excitability of the vegetative apparatus—perhaps in consequence of the lack or exhaustion of certain vitamins, or because the ions which are essential for the maintenance of the vegetative tonus (for example, the calcium ion which helps to maintain the sympathetic) are not circulating in the blood in sufficient quantities. This explains the curious blend of overexcitability on the one hand and susceptibility to rapid fatigue on the other, such as we find in neurasthenia;—that "irritable weakness" which in many of its features recalls the adynamic symptom complex of Addison's Disease.

We will now proceed to consider the character of the three principal forms of "actual neurosis."

a) The Neurasthenic Syndrome

In 1878 the American physician George M. Beard defined his conception of neurasthenia or "nerve weakness," and described it in a masterly clinical picture. The illness itself, of course, was not new; Beard was merely the first to define it with greater exactness, and to

give it an imposing name, which had a great and immediate success both with the medical profession and with their patients, whereas before this the relevant syndrome had led a sort of Cinderella existence in German literature under the designation of "common nervousness."

The basic symptom of neurasthenia, which, unlike hysteria, is predominantly an affection of the male sex, is, as we have observed, an "irritable weakness"; that is, on the one hand an intensified susceptibility to almost all external and internal stimuli, and on the other hand an abnormally rapid incidence of fatigue of the nervous system, as the result of any kind of effort, whether physical or psychological; briefly, an abnormally ready response (lowering of the threshold of excitation) to all cerebrospinal and vegetative excitations, combined with abnormally rapid fatigue in respect of motor output. To this basic disorder we can readily trace the origin of all the unusually multiform symptoms of neurasthenia. Insomnia, for example, which usually takes the form of disturbed sleep or premature awakening, may obviously be explained as a hyperesthesia of the sensory organs, especially of the sense of hearing, but also of the visual and tactile sense, etc., while the general hyperesthesia of the spinal nerves leads to the occurrence of manifold pseudo-neuralgic pains in various parts of the body—the so-called "spinal irritation" of the older authors in which pains in the back play an especially prominent part.

A second group of symptoms is related to the rapid appearance of fatigue on the occasion of all motor performances, and finds expression in general physical weakness, tremor, and susceptibility to fatigue, which can be directly measured on the ergograph. A characteristic of this susceptibility to early fatigue is the fact that it is not present in the beginning, but appears only in the course of muscular activity, when it increases with the rapidity of an avalanche. In the light of our knowledge of the basic functions of the sympathico-adrenal apparatus we may readily interpret this symptom as an insufficiency of the "emergency function" of the sympathetic.

Of course, the sexual system also may suffer from a primary neurasthenia, and if the irritable weakness in this sphere is especially disturbing one speaks of "sexual neurasthenia." By the older authors special importance was attached to these disorders in the sexual sphere, and they were regarded as typical manifestations of the basic

disorder, the irritable weakness. But today we have become very skeptical in this respect, for most of the symptoms of sexual neurasthenia have been gradually revealed as psychogenic products. Still, certain of the higher manifestations of the so-called sexual neurasthenias cannot be entirely devoid of a functional-organic component. With noticeable frequency these higher manifestations of sexual neurasthenia, and above all spermatorrhea—that is, emission of semen with an unerected penis during defecation and in connection with exuresis—are provoked by a previous chronic gonorrhea with inflammation of the pars prostatica urethra. Yet Oppenheim, in his day, declared that in the development of the ordinary forms of sexual neurasthenia—repeated pollutions after a previous period of intensive masturbation, ejaculatio praecox, and finally complete impotence—psychic factors, above all hypochondria, feelings of anxiety and guilt, play the principal part in the production of the symptoms. We shall return to the consideration of this important question.

The numerous directly visible vegetative symptoms of neurasthenics: their vasomotor disorders (increased vasomotor irritability of the skin, abnormal lability of the pulse, etc.), the manifold nervous disorders of respiration, culminating in bronchial asthma, the lability of the blood pressure, the extraordinarily widespread derangements of the gastric and intestinal and even of metabolic functions (nervous dyspepsia, flatulence, constipation, colitis membranacea, lability of the body-weight, etc.) are likewise readily intelligible as symptoms of a disequilibrium in the visceral nervous system. All neurasthenics suffer from such a disequilibrium, generally in the form of an excess of sympathetic tonus, but sometimes also in the form of an increased readiness of response in the parasympathetic.

Lastly, we must note the psychical primary symptoms of neurasthenia, which Janet has summed up under the designation of psychasthenia. These basic psychic symptoms, indeed, are among the most constant signs of neurasthenia, and are never entirely absent. They too obey the law of "irritable weakness" which governs the entire symptomatology of the genuine neurasthenias, and on the basis of this fact you can easily adduce the symptoms for yourself. They consist of increased affective lability, enhanced responsiveness to affects, and lability of affects; in the early appearance of mental fatigue; in a certain inability to concentrate, and finally, in a tend-

ency to depression. All these disorders, however, are only of a quantitative nature; they never amount to a really qualitative alteration of the memory, the powers of perception, the intelligence, etc. What seems to be a serious failure of perceptiveness is often merely the result of an inability to concentrate, which again is due to the rapid flagging of the attention through fatigue. In the event of exertion, i.e. under objective compulsion, in response to encouragement, or extreme interest, even the most seriously affected neurasthenic can occasionally achieve results of the highest quality, thus proving that there is no actual qualitative decline of the mental powers. Nevertheless, in the case of such patients there is usually a considerable decline of general efficiency—simply by reason of the inequality and lability of his achievements.

Nowhere has such confusion been caused as in the sphere of the psychic symptoms of neurasthenia by the constant mistaking of the primary symptoms for the secondary psychogenic consequences. For example, precisely with reference to the psychasthenic primary symptoms many authors have included the whole vast sphere of the phobias and the obsessional neuroses, under the subheading of psychasthenia, in the neurasthenias, a mistake which a discerning scientist would never have made. For example, Oppenheim, in his celebrated treatise on the nervous diseases, has always dealt with the phobias and obsessional conditions as special forms of neurosis. He quite rightly contested the still more sweeping opinion of many authors (for example, Strümpell), that all the symptoms of neurasthenia, even the bodily symptoms, are merely the consequences of morbid psychic processes, of "erroneous thinking" and the like. We, on the contrary, understand by "neurasthenia" merely the primary symptoms of the affection (as already described), and we distinguish them sharply from the secondary psychogenic superstructure which inevitably makes its appearance in the course of the chronic disorder. Thus, while the designation of psychasthenia coined by Janet is undoubtedly useful, and even essential, it should, in my opinion, be reserved exclusively for the psychical primary symptoms of neurasthenia.

The distinguishing of the psychical primary symptoms from the psychogenic superstructure does not in principle present any special difficulty, provided we adhere to the simple rule that all complex-

determined psychical symptoms are of a psychogenic nature; and, on the other hand, that all symptoms which do not satisfy this criterion belong to the basic symptoms—that is, they are based on the primary lability of the vegetative system.

On the other hand, it is doubtless a fact that no other bodily affection is so liable to secondary psychogenic overgrowths as neurasthenia (though this applies even in a higher degree to anxiety neurosis); and this just because the actual neuroses primarily involve the psyche, as an organ responsive to abnormal vegetative excitations. Every more or less chronic neurasthenia or anxiety neurosis displays such a psychoneurotic superstructure, and what we see year after year in the consulting room is, in most cases, no longer the pure actual neurosis but a mixed neurosis with an actual-neurotic nucleus.

In neurasthenia this mixed neurosis takes above all the form of hypochondria;¹ and in the first subchronic phase this form invariably appears.

The form of disorder just described was defined by Beard as an exhaustion neurosis. This conception of the etiology of the affection was for a long while the prevailing theory, until it gradually became evident that similar functional-nervous syndromes could be evoked by very different pathological agencies. To begin with, various authors rightly called attention to the fact that a typical neurasthenia sometimes occurs in childhood, so that there is apparently a constitutional congenital neurasthenia. Indeed, many later writers laid the principal emphasis on this fact, holding that the essential cause of every neurasthenia is a congenital, constitutional, diathetic debility of the nervous system, a so-called neuropathy, whereas the various intravital operative pathological factors were merely evocatory or accessory agents. At all events, these considerations led to the making of a fundamental distinction between a constitutional form and the acquired exhaustion neuroses in the sense of Beard's original definition.

Moreover, it was presently realized that even the conditions of

¹ On account of its regular appearance in every case, hypochondria has often been regarded as a basic symptom of neurasthenia; indeed, some authors have actually considered it to be a peculiar form of actual neurosis. This, I think, is going too far. On the other hand, it can really be debated whether hypochondria should not be counted among the basic symptoms of neurasthenia.

nervous debility, which often persist for a long while after severe bodily illness, are indistinguishable in their clinical symptomatology from the classic forms of Beard's neurasthenia; and further, that in certain chronic intoxications, especially in chronic alcoholism, nicotine poisoning, and the like, exactly similar neuro-vegetative symptoms occur. Undoubtedly, then, there is a postinfective and a toxic neurasthenia. By many authors, and especially by Freud, the clinical form of the so-called genuine neurasthenia was assumed to be a consequence of long-continued excessive masturbation; that is, it was claimed that it had a sexual etiology. Then, with the introduction of obligatory accident insurance by the State in all civilized countries, as insurance became more general, typical clinical pictures of neurasthenia were observed in many of the victims of casualties who in the course of often long-drawn litigation endeavored to obtain recognition of their just or merely alleged claims from the authorities and the courts; so that the physicians began to speak of a posttraumatic neurasthenia, or simply of a "casualty neurasthenia." Lastly—but not finally—such psychical causes as chronic worry and disappointment, anxiety as to the future, distress and depression due to financial losses, and so forth, were increasingly regarded as of decisive significance in the causation of neurasthenia. Therefore, in contrast to Beard's original conception of an "exhaustion neurosis," neurasthenia came to be defined as a psychoneurosis which would not differ in its etiology from the other great psychoneuroses, such as hysteria, the phobias, and obsessional neurosis (Charles Dubois, Strümpell and many others).

We see, then, that since Beard's day the clinical picture of neurasthenia has to a great extent lost its consistency as regards its etiology. In fact, we are dealing rather with a pathophysiologically consistent syndrome, which can evidently be provoked by entirely different pathological agencies. This circumstance, and the accompanying vagueness of clinical definition, have contributed largely to the fact that the nosological conception of "neurasthenia" has gradually fallen into disrepute among many clinicians, ranging from internists to psychoanalysts, since it was only too often employed as a convenient sort of holdall for anything that could not be more clearly defined. Today, therefore, in the medical clinics, physicians prefer to speak quite generally of "vegetative neuroses," and to a great

extent the old clinical form of "neurasthenia" is included in this conception. To this there can be no essential objection, as long as one realizes that the notion of "vegetative neurosis" comprises a great deal more than the clinical pictures of "neurasthenia" in the former, narrower sense of the term: namely, the entire sphere of the actual neuroses in Freud's sense of the term (and even more than this!); that is, anxiety neurosis, "fright neurosis," and "shock neurosis," of which more will be said later.

To my thinking, therefore, it is best, in spite of everything, to hold fast to the conception of neurasthenia; but one must be perfectly sure what one means by it. We understand by "neurasthenia" a functional—that is, a reversible—neuro-vegetative complex of symptoms, which can indeed be produced by various pathological agencies, but which as a general syndrome presents such a consistent clinical formation that one cannot briefly dismiss the assumption of a uniform pathophysiological genesis and ultimately a uniform morphological basis of the various neurasthenic disorders. We are certainly not confronted with an affection of the peripheral vegetative nerve system,² nor with a primary endocrine disorder, but with a functional affection of the vegetative brain centers and certain accessory apparatus in the brain; first of all the blood serum filter or hemo-encephalic barrier. Here—in the vegetative centers, from the floor of the sinus of the fourth ventricle to diencephalon—it is evident that various pathological factors operate which, as we have explained, are liable to provoke the neurasthenic syndrome.

If we now test the theory of neurasthenia just outlined in respect of the various possibilities of occurrence in the presence of the pathophysiological facts, we come to the following conclusions:

1. *Exhaustion Neuroses*

To begin with, as regards Beard's theory of neurasthenia: the so-called "nervous exhaustion" or "exhaustion neurosis" is still described by many authors as *the* neurasthenia, on the grounds that everything which is not based on this etiology simply cannot be regarded as neurasthenia. One of the most consistent defenders of

² Such affections of the peripheral neuro-vegetative system do not bring about any neurasthenic syndromes, but rather the vasomotoric and trophoneuroses described by Cassirer.

this point of view was Möbius, who regarded neurasthenia simply as a chronic fatigue, a *defatigatio*. The reason why this derivation of "nervous debility" was particularly favored by the lay public was explained in the third lecture. No doubt there are cases in which the factor of exhaustion plays the principal part, but in the light of our present knowledge there can be no question of our referring all cases of neurasthenia merely to exhaustion. Indeed, we have reasons to assume that only a small proportion of the pathological conditions comprised under the name of neurasthenia—or, quite generally, under the description of "vegetative neuroses"—are really exhaustion-neuroses in Beard's sense of the term. Thus, for example, it was by no mere chance that in 1940, in a military hospital, among twenty-six cases with a purely functional neuro-vegetative (neurasthenic) syndrome, I found only one patient whose acute vegetative neurosis could in all probability be attributed to overexertion on active service. On the other hand, the supporters of the exhaustion theory have objected that the old conception of neurasthenia has been unduly enlarged by many recent authors; that is, it has been inadmissibly expanded to include almost all the functional disorders of the vegetative nervous system. However, there does not seem to be any good reason why one should not include under a common nosological designation all those pathological conditions which reveal a uniform clinical symptomatology and pathophysiology, even if they do not all occur in the same etiological manner. As a matter of fact, it seems to me more correct to interpret a pathological state in accordance with its physiological and anatomical basis, so far as this is known (as it is, to my thinking, in the case of the neurasthenic syndromes), instead of restricting it, nosologically, to any one of its different genetic conditions, only because this was the first to be demonstrated. But if in the meantime a number of other genetic possibilities have been indicated for the same clinical syndrome, we are surely justified in describing this syndrome as "neurasthenia." As we have seen, then, many neurologists, psychiatrists and internists have long ago recognized that there is no justification for restricting the conception of neurasthenia to the relatively infrequent genuine exhaustion neuroses. At the same time, we have still to bring the cases of genuine exhaustion neurosis into harmony with our hypothesis, according to which the neurasthenic syndrome, no matter by what etiological

agencies it is provoked, is based, in a quite general manner, on a functional derangement of the vegetative brain centers. In the first place, we may recall the old "consumption theory" of Edinger, according to which the mere excessive functioning of a nervous apparatus may result in the course of time in its impoverishment in respect of certain substances without whose presence in abundance the function cannot in the long run be maintained in a state of sufficiency. But this theory related in the first place to organic structural injury in the central nervous system; it was invoked by Edinger, in particular, to explain the systematic disorders of the brain and spinal cord. But in neurasthenia—and especially in the form which one must accept as an exhaustion neurosis in the narrower sense of the term—we are always dealing with a purely functional and in theory a reversible process. However, we can apply the "consumption theory" in a certain sense if we keep in mind the more recent discoveries in the sphere of humoral pathology and the theory of the vitamins. The hitherto extremely vague notion of "exhaustion neurosis" takes a fresh significance from the results of these researches.

For example, we can well imagine that by constant overfunctioning of the vegetative centers in the neuroplastic interstitial layer of the investing membrane—that is, where the excitations of the vegetative nervous system are conveyed to the effector organs—an increasing poverty of those electrolytes sets in (for example, of calcium ions) by whose absence the sympathetic loses its efficiency—i.e. its points of impact. You heard in the fourth lecture (p. 61) that a substantial increase on the quotient $\frac{K + Na}{Ca}$ over 1, as the result of calcium deficiency, results in a damping of the activity of the sympathetic even to the point of complete suppression, so that the emergency function of the sympathetic can no longer be sufficiently maintained, while the contrary ratio of the mixture of the said electrolytes reduces or inhibits the influence of the parasympathetic. One would therefore expect, in the case of disturbances of the ional equilibrium in the neuroplastic interstitial layer (whether primary, or secondary—i.e. due to consumption of the substances in question) neuro-vegetative disorders which would be in complete correspondence with the syndrome of so-called nervous exhaustion. On the other hand, we know that both the endocrine glands and the vegetative centers are unusually rich in vitamin C (F. Dietl, H. Neumann), and that the cells can function only if their content of vitamin C is adequate. But the formation of the vitamins themselves is largely dependent, as Morell and others have shown, on the influence of certain hormones, in particular the hormone of the adrenal cortex, which, as we know, is involved in the reparatory and assimilatory function of the parasympathetic. In particular, the coupling of nicotinic acid amide with the remnant of the nucleotidin by which the formation

of the vitamins in the body is first effected is dependent on the co-operation of hormones.

On the basis of this new biochemical knowledge we can understand the pathophysiological origin of neurasthenic states of exhaustion better than would have been possible a little while ago. But what of the rest of the etiological possibilities of the production of the neurasthenic syndrome? To explain these processes we must refer to further, neurophysiological processes, in addition to the above-mentioned biochemical and hormonal processes.

2. *The Neurasthenic Syndromes After Infectious Illnesses and Intoxications (Postinfective and Toxic Neurasthenias)*

It is obvious that entirely similar syndromes—only, of course, with a different and more hypochondriacal superstructure—could arise through the influence of poisons. For example, the function of the hemo-encephalic barrier as a protective membrane can be deleteriously affected by chronic toxic influences of all kinds, so that toxic functional disorders of the vegetative brain centers may occur, and so, once more, may neurastheniform syndromes. Among the toxins which have the power of provoking such neuro-vegetative disorders we must consider certain exogenous poisons, and also certain endotoxins.

a) Among the exotoxins one must make special mention of carbon monoxide gas, which by the chronic effect of the minutest doses (for example, as in laundries which used to employ irons heated with charcoal) not infrequently provokes neurastheniform symptoms which gradually disappear if the causing agent is removed. Similar symptoms have been observed of recent years in insufficiently ventilated garages. Further, the chronic abuse of certain medicaments may lead to typical neurasthenia. This, of course, refers also to the really toxic beverages: the neuro-vegetative symptoms which we see in chronic alcoholics and also in morphia addicts, etc. very largely resemble, in their subjective and objective form, one or another of the so-called genuine neurasthenias, so that one can actually speak of "alcoholic neurasthenia." Chronic nicotine poisoning also gives rise to similar neuro-vegetative symptoms, especially in connection with the cardio-vascular apparatus.

b) Further, after infectious illnesses, or in consequence of chronic

infections, severe vegetative neuroses are not infrequently observed, in particular vasomotor disorders and toxic crippling of the elementary psychic performances. We have already spoken (in the last lecture) of the conditions occurring as sequelae of influenza and typhus, and also in chronic tuberculosis. As a matter of fact, we are not considering here any possible residues of focal bacterial lesions in the region of the vegetative brain centers (for in that case, one would, of course, have to speak of encephalitis), but toxic functional disorders of a reversible nature, provoked by the toxins of bacteria or viruses. These disorders might, theoretically, be placed on the same plane as the neurasthenias, or certain mild and chronic intoxications.

c) Endotoxins. Here we must consider, before all, the poisons of metabolism which reach the bloodstream from the intestine. Such auto-intoxications from the digestive canal often provoke more or less serious complexes of symptoms. They are favored, of course, by inadequate intestinal peristalsis, such as occurs in constipation.

3. *Concussion Neurasthenia*

A typical and often a very serious neurastheniform complex of symptoms can be evoked also by a direct mechanical shock to the vegetative centers of the diencephalon; that is, after concussion of the brain. The symptoms in question are very like those of the so-called genuine neurasthenia, for which reason I have unhesitatingly described the complex of symptoms as traumatic or concussion neurasthenia (Brun, 1933). Formerly the syndrome was often described as "traumatic neurosis," with the result that many physicians erroneously conceived of it as a psychogenic condition—that is, as a so-called casualty neurosis or wishful neurosis; to which, in my opinion, it has no similarity whatever. It is true that one of its sequelae is very often a secondary psychogenic superstructure—according to my statistics in some 56 per cent of all cases—yet the primary symptoms (in the bodily sphere a general lability of the vegetative nervous system; diffuse headaches; vertigo on suddenly changing the posture; insomnia, intolerance of alcohol, tremor, sweating, dermatographia, cardio-vascular symptoms, and frequently increased pressure of the cerebrospinal fluid; sometimes accompanied by a cerebral form of diabetes; in the psychical sphere, inability to concentrate, retardation of thought, and of all associative processes, increased irritability,

depression, etc.)—these symptoms are nevertheless not psychogenically determined, but are immediately connected with the concussion of the vegetative brain centers. The syndrome of concussion neurasthenia may, of course, be connected with organic, structural lesions of the brain and the corresponding organo-neurological symptoms, but this coincidence does by no means occur in all cases. Moreover, in a considerable number of cases I have been able to establish the existence of an isolated traumatic neurasthenia (in the sense just defined); that is, a neurasthenia without the slightest signs of recent and severe cerebral contusion, without a trace of any sort of organo-neurological symptoms, but with completely normal reflexes, etc. It was precisely the occurrence of such “pure” cases that was one of the reasons why I have, on principle, divided and distinguished this syndrome from the actual encephalopathic conditions showing the syndrome of a psycho-organic defect (in which neurological symptoms of a recent *contusio cerebri*, i.e. of a crude structural lesion of the brain, are never absent). For me, another reason for this distinction lay in the fact that postconcussive neurasthenic disorders are almost always of a reversible nature, that is, as a general rule, in so far as no complications intervene, within a few months, or at most after the lapse of a year, they disappear entirely, showing by this favorable prognosis that they are functional-organic disorders.

In contrast to the genuine concussion neurasthenia such as I have just described, the “pension or insurance neurasthenia” is not, of course, a late sequel to a mechanical concussion of the vegetative brain centers, but a psychogenic evocation of neuro-vegetative symptoms (together with numerous hysteriform and obsessional-neurotic superstructures) in connection with the strain of the wearisome and often disappointing struggle for a pension. This “pension or insurance neurasthenia” was already familiar to Erichsen, an American author, who was the first to write of “casualty-neurotic” disorders after railway accidents; and he already described the psychic excitations of the litigation connected with the claims for an indemnity as the essential cause of these affections.

4. *The Sexual Theory of Neurasthenia*

Freud, who was the first to recognize the somatic basis of the “actual neuroses,” assumed for both of their subordinate forms a fundamental uniform somatic and sexual condition. An actual neurosis develops (according to Freud) when the libido-discharge in the sexual act is either inadequate (incomplete or abnormal), or when it does not occur at all. These conditions obtain when the sexual

affect either has to put up with an inadequate discharge or when it is forcibly inhibited. In the first case neurasthenia would develop, in the second case anxiety neurosis. On the basis of our modern knowledge of endocrinology we can indeed very well imagine an abnormal issue of sexual excitement as a pathological condition. We know that the increase of sexual libido depends on the gradual enrichment of the sexual hormone in the blood, and further—on the analogy of the discharge of adrenalin during excitation of the sympathetic—we have now every reason to assume that in sexual excitement, as soon as this reaches a certain intensity, in the preliminary stage, there is a secondary acute, avalanche-like, increasing discharge of hormone into the bloodstream. The erotization of the nervous system, thus increased to a maximum, is apparently essentially diminished after the satisfactory issue of a sexual act, and it is then usually some time before the libido gradually increases again. It is also very probable that during the sexual act itself, i.e. through the accompanying motor and psychic (affective) discharge (the so-called relief)—in a word: in the orgasm, there is a consumption or possibly rather an inactivation of the sexual hormone affecting the nerve cells.

If, then, the orgasm is prevented at the last moment by the forcible inhibition (retardation) of the sexual affect, the hormones in question remain active in the blood and in the nerve cells and may, since they are abnormally enriched, produce toxic effects on the nervous system (and, to begin with, after penetrating the hemo-encephalic barrier, on the vegetative brain centers). But even an inadequate issue—for example, in a sexual act in which the somatic excitation is diverted from the psyche—might provoke similar disorders, though of a less acute character. Such a diversion, or a dissociation between the physical and the psychic components of the libido, Freud believed to take place in onanism, in which case the sexual partner is lacking, the psychosexuality being concentrated exclusively on the imagined satisfaction. Accordingly, Freud at the time was inclined to perceive the main cause, or rather, the essential condition of the development of neurasthenia, in such an inadequate though quantitatively complete discharge of libido as occurs, more especially, in excessive onanism. Thus, according to Freud, neurasthenia was essentially a sequel to the abuse of autoerotic masturbatory sexual satisfaction.

We must confess that this theory can no longer satisfy us today. To begin with, it is difficult to see how hormonal disorders could be supposed to arise, in spite of quantitatively complete discharges of libido, through a so-called "inadequate" sexual satisfaction. For even if a sexual partner was lacking in the autoerotic act, yet that partner, as a rule, was most vividly represented by the imagination, or the lustful conception might even be connected with the fantasy of a perverse sexual act. In any event, it is a fact that in many, and indeed in most cases, the motor and psychic discharge of sexual affect is just as complete as in the normal sexual act. A sole exception is constituted by the so-called "psychic onanism," which does not proceed as far as the final satisfaction, but seeks gratification in endlessly lingering over lustful imaginings. In this case, however, there is no question of a complete discharge of sexual affect, and here it is indeed possible that the conditions of a deleterious influence on the vegetative system, as defined by Freud, might really exist. But as regards the positive physical act of onanism, one has the distinct impression that Freud, when he stated his theory (1895), was himself still unconsciously influenced by the conviction of the deleterious effects of onanism which was then very common, even among physicians. As against this conception it is enough to point to the enormous frequency of this form of self-satisfaction—a fact which has recently been confirmed by the psychoanalysts themselves. The reason is obviously to be found in the circumstances of our civilization, which puts every obstacle in the way of a normal sexual life for the rising generation, so that persons whose sexual instincts are more or less of normal strength are almost compelled to seek this outlet. Today we have good reasons for assuming that masturbation is an absolutely normal transitional stage in the development to mature sexuality. But a sexual activity which occurs, almost as a matter of course, in 90 per cent of all human beings during the years of development, cannot possibly be described as a vicious fornication. As a matter of fact, the somatic dangers of onanism were formerly, to say the least, enormously exaggerated. According to Stekel they do not exist at all. In confirmation the fact may be cited that feeble-minded persons and lunatics in asylums often masturbate excessively for years without developing the faintest physical symptoms of a neurasthenic character. Evidently the psychical concomitant circumstances are of much

greater importance than the physical act itself. Foremost among these psychical factors is anxiety in respect of the alleged evil consequences of the "vice"; inasmuch as this anxiety is exploited by all sorts of conscienceless quacks and swindlers who, under the imposing titles which they have conferred upon themselves—such as "Professor," "Medical Specialist," "Head Physician," etc.,—surreptitiously sell their popular brochures to the people, plying their filthy trade under the pretext of "enlightenment." What these gentry can do in the way of intimidating and actually terrorizing ignorant young people may be judged from the following quotation, which I take from one of the most infamous of these brochures—the widely circulated volume by Rumler whose successor, until some ten years ago, was still coining money by selling it in Geneva. We read, on page 88:

"The further diseases of the spinal cord observed after onanism consist in: 1. Great spinal debility and morbid irritability of the spinal cord. 2. Inflammation and softening of the spinal marrow (Myelitis and Myelomalacia). 3. Spinal gout, characterized by unspeakable pains in the spinal nerves. 4. Spinal consumption (Tabes dorsalis)." The author then describes the symptoms of tabes in detail, and continues, on p. 90: "To give a more exact description of all the brain affections which can be caused, directly or indirectly, by onanism and sexual excesses of any kind would be more than the limited space of this book permits: it can therefore only be indicated that a whole number of brain diseases, such as cerebral atrophy, encephalitis, meningitis, softening of the brain, cerebral hyperemia, water on the brain, etc. have been observed in onanists. It goes without saying that these affections, like those of the spinal cord, may also be due to a number of other causes. Of the above-named brain affections, that which is most frequently observed, as the consequence of long continued onanism and sexual excess, is chronic softening of the brain (Encephalomalacia) . . ." (and here follows a detailed description of the symptoms) "We see many persons exhausted by self-abuse and debauchery suffering from weak sight, indeed complete blindness often sets in: as a rule the power of vision gradually declines . . . in persons who by nature have an irritable nervous system, epilepsy is a not infrequent consequence of sexual debauchery, that is, of onanism . . . We have often seen paralysis ensue as the consequence of onanism and sexual excesses: several of these cases were evidently accompanied by softening of a portion of the brain or of the spinal cord, which immediately explained the paralysis; in other cases atrophy of the spinal cord (Tabes dorsalis) or a stroke (apoplexy) were responsible . . . A comparatively large proportion of the lunatics received by the asylums are numbered among these secret sinners, who, having already reached the verge of intellectual and physical bankruptcy, often persist in their unnatural acts." Concerning impotence Rumler writes on p. 11: "There are many causes which may lead to this incurable state of debility; but relaxation of the genital system takes the first place. With the beginning of this vice the long, with its whole train of terrors, closes in upon the onanists. That miserable

weakling is a criminal who dares, in this state, to enter into matrimony, for he is incapable of all the joys and duties of love and wedlock."

It can be imagined what disastrous effects such frightful threats, of which the prophecy of total impotence and incapacity for marriage is among the least, must produce on the emotional state of a harmless and ignorant youth, who without such warnings—thanks to the general horror and condemnation which onanism evokes in his environment—suffers enough already from a bad conscience, and the compulsion to conceal his vice with the most painful secrecy. To the constant dread of discovery and exposure, the increasing mental isolation into which he retires, since he dare not confide in anyone, the progressive introversion and separation from his environment, and above all from the opposite sex, is now added the appalling dread of the alleged and dismal consequences of his "vice," which he anticipates from day to day after reading such a pamphlet. Now, as a rule, begins a desperate battle against onanism, in which he may be victorious for longer or shorter periods, but in most cases he relapses from time to time, and his backslidings are followed by further and even more painful fits of depression.

You see that in all this there is no question of immediate physical effects: the deleterious effects of masturbation occur exclusively in the psychic sphere, or rather, they are first provoked through the mediation of the psyche. And in this sense it may be admitted without reserve that onanism may have injurious reactions and can produce neurasthenia. But the injurious effect on the vegetative nervous system is not the direct consequence of the onanistic act itself; it occurs in connection with the painful feelings of guilt (whose real content is always ultimately unconscious) and the chronic anxiety awakened thereby; concerning which you learned, in the last lecture, that it has the power, unparalleled by any other affect, of causing the most intensive excitations of the sympathico-adrenal system. If such excitations are repeated constantly for months or years, they are bound, in the long run, to produce a partial insufficiency of the chemical filter of the brain—the hemo-encephalic barrier—with the consequent effects on the vegetative brain centers.³ You will now

³ Since this effect, although it proceeds from the psyche, is nevertheless immediately physiological (direct shock to the sympathico-adrenal system) the symptoms thus arising are nevertheless actual-neurotic in so far as they have—at least, primarily—no

understand that a neurasthenia produced in this way can be cured by suitable psychotherapeutic explanation and treatments—by relieving the patient's anxiety and sense of guilt.

5. *The Psychogenic Etiology of Neurasthenia or Vegetative Neurosis*

Just as chronic anxious states, in connection with the onanism-complex, can lead to neurasthenia, so, of course, psychic excitations of a different nature, if they are only sufficiently intensive and chronic in their operations, may in the end produce temporary neurastheniform conditions. Such agencies are, above all, defamation (loss of reputation), chronic vexation and mortification, constant grief and apprehension; and also a responsible employment a little beyond the capacity of the person employed; the strain of being constantly harassed or hurried while at work, etc. You have already met with such a "neurasthenia resulting from worry" in the form of the so-called "pension and insurance neurasthenias" (p. 99). Under all these circumstances there is indeed often an overburdening of the psyche, but its effect on the psyche is described as due to "mental overexertion," which is held responsible for the neurasthenia. For this reason a great many physicians have come to the erroneous conclusion that neurasthenia is a psychogenic affection, a psychoneurosis in the more restricted sense of the term, like hysteria, the phobias, and obsessional neurosis. But so far, apparently, they have not considered the question as to the way in which psychic excitations can evoke a neurasthenic syndrome. In the current medical textbooks we do not find any mention of this most essential point. The writers are content with the mere statement of the fact that neurasthenia may be caused by chronic agitation. But really the connection, in the light of our recent explanations, is simple enough, and readily understood. You heard in my last lecture that in the case of a hypersensitized sympathetic every excitation of the vegetative nervous system—including every affective excitation—reaches a greater amplitude, especially in the sympathetic, and in this way evokes pathologically increased organic reflexes. The way in which it does this is as follows:

symbolical significance. They are rather the direct consequences of the physiological pattern of anxiety.

The stimulus received by the sensory organs—think, for example, of a telegram containing disastrous news for the recipient—reaches, in the first place, the sensory areas of the cerebral cortex. From these areas extensive arcs of excitation are activated, which ecphorize the chronologically arranged layers of engrams of earlier excitations of the same nature, and are finally integrated in the forebrain. There, appreciation occurs—the grasping of the vital significance of the sensory stimulus received. If this significance is one that means disaster, if it touches the vital and instinctive interests of the person, it releases correspondingly intensive psychic excitations which rush along reflex paths to the vegetative brain centers. These are the paths which serve as the basis of Pavlov's conditioned reflexes and inhibitory reflexes.

Every powerful affect thus leads to an intensive overinnervation of the vegetative brain centers and there evokes corresponding unconditioned and conditioned reflexes, with all the consequences to and reactions upon the vegetative nervous system, the internal secretion, and—in the case of repeated and chronic action—finally on the hemo-encephalic barrier. As a result of the consequent affective sympathetic excitation of the endocrine glands, whereby the unpleasant affects, such as anxiety, anger, rage, vexation, etc., excite first the sympathetic system and then the chromaffin cells of the adrenal medulla, there occur constantly repeated and massive discharges of adrenalin into the blood, which in their turn lead to an increased permeability of the blood serum filter; that is, they lead to the setting-up of the vicious circle which has already been described.

It is this excessive demand upon the vegetative nervous system, by recurrent and excessively strong affective excitations, and the resulting "nervousness," that first evokes the neurasthenic symptoms. But even here these symptoms—at all events, in the beginning—are not complex-conditioned in the sense of a symbolic meaning—that is, a significant connection between the symptom and the psychical stimulus which evokes it. Here again the unconscious wisdom of language has spoken truly when it says of someone that he is suffering under poisonous criticism, or that somebody has become "cranky" as the result of venomous sarcasm, etc. Another question is, of course, why one man would be so touchy or be constantly driving himself while at work, why he will positively allow his work to "wear him out,"

while another, who takes things more easily, achieves his purpose more effectively. Here, you see, we are confronted with a new and peculiar problem—the question whether neurasthenia may not occasionally be the secondary consequence of an already existing primary neurosis. For a person who is confident of his own power, who does not suffer from a sense of inferiority or cherish pathological ambitions or the like, will not be so irritable; he evidently has no need of such overcompensations; and he will endure vexation, grief, and distress better than a latent psychoneurotic, so that he will not so readily become neurasthenic in this particular way.

On the other hand, it seems to me, on the basis of certain observations, that under certain circumstances a single severe psychical shock, above all a shock of alarm, can undoubtedly evoke a neurasthenia. For example, I once knew a patient in whom a severe attack of anxiety, from which he suffered one day when he was in perfect health, resulted in a protracted neurasthenia, which persisted for years after the anxiety-neurosis had passed on. The mechanism of development of the neurasthenia was in this case, apparently, much the same as in the causation of Parkinson's or Basedow's disease by violent affective influences.

We see, then, that through purely psychical excitations, that is, in a purely psychogenic way, via the vegetative nervous system, endocrine glands, and increased permeability of the blood serum filter, symptoms of physical illness may be evoked, and this in the sphere of the entire vegetative nervous system, even to the point of grave alterations of the metabolism—that is, the cellular chemism—of almost all the internal organs. Today, therefore, we may regard the production of physical—or in the first place, of course, of functional-organic symptoms—by purely psychical causes, as a scientifically established fact. But in the case of the psychogenic production of neuro-vegetative symptoms (this must once more be emphasized!) we have a form of psychogenesis which is fundamentally different from that which produces the symptoms of the genuine psychoneuroses—that is, the hysterical phenomena, the phobias, and the symptoms of obsessional neurosis. There is indeed in these cases of neurasthenia a psychogenetic origin, inasmuch as continued and intensive psychic agitation (anxiety of the onanist, apprehension, worry, feelings of insufficiency and the resulting harassment and overwork, and so

forth) led to disequilibrium in the endocrine-vegetative apparatus, and an increased permeability of the hemo-encephalic barrier. But the symptoms of these neurasthenias were not psychogenic in the stricter sense of the term; were not "ideagenic," as one used to say, for the psychical trains in question had no part in the symptom formation. They were rather the result of the direct disturbance of the endocrine-vegetative apparatus. Only in a secondary degree might they have acquired a partial significance through incorporation in the already existing complexes.

6. *Congenital (Constitutional) Neurasthenia*

Finally, we must deal briefly with the problem of the congenital, constitutional neurasthenia. It has already been indicated that there are cases in which neurasthenic phenomena appear in childhood, when the later chronic neurasthenia appears to be merely the continuation and predestined aggravation of a constitutional neuropathic disposition (Oppenheim et al.). Its somatic bases, according to von Monakow, are perhaps to be found in an innate insufficiency of the blood serum filter on the one hand, and on the other, an innate functional inferiority of certain neuro-endocrine systems. In my opinion, however, it would be a mistake—merely because there are such constitutional forms—to conceive every neurasthenia as a constitutional neuropathy, to attribute the chief responsibility for the development of neurasthenia to congenital disposition, and to be satisfied with this sole etiology as an explanation of the disease.

In the majority of cases the situation is actually much the same here as in other affections; in general, these illnesses are more readily contracted by a person who has a certain constitutional disposition, but even in the absence of this predisposition the disorder may be contracted—namely, when the exogenous conditions have reached a certain intensity. The more intensive these specific exogenous conditions, the less need is there of the previous existence of a constitutional disposition in order that the person may contract the affection; and conversely. This holds good also, as Freud has demonstrated, for the psychogenic conditions under which hysterical, phobic and obsessional syndromes are provoked and developed. The psychic traumata to be considered in this connection—and here we are dealing, according to Freud, almost exclusively with distressing,

repressed sexual complexes—form, together with the constitutional predisposition, a so-called “supplementary series,” and both kinds of etiological factors are here in a reciprocal relation.

In conclusion, a few words as to the mutual relations between the basic symptoms of neurasthenia and the secondary psychoneurotic superstructure.

Even before the formation of a secondary psychoneurosis the neurasthenic makes the disquieting discovery that his illness displays a tendency to extend beyond its original limits. For example, if at one time his symptom—let us say, an attack of gastralgia—is provoked by intense annoyance, it may easily happen that from now onwards any violent emotion will provoke the symptom. But this is not all; it may also happen that from now onwards the mere recurrence of a chance concomitant of the situation in which the patient was for the first time attacked by his gastric spasm is enough to provoke a recurrence of the pathological organic reflex. For example, if he had the first gastric spasm after a moment of extreme vexation at lunch, henceforth, if the same dish is served as was then on the table, that will be quite enough to provoke an immediate recurrence of the spasm, without any fresh psychic agitation. And further, under some circumstances the unhappy patient may find that henceforth the mere fact of sitting down to lunch, no matter what the menu, brings on the danger of a recurrence of the symptom; or it may happen that the spasms occur punctually at the given time—between twelve and one o'clock—even if for some reason the patient has had to alter the time of his mid-day meal. We know how such things come about. The vegetative crisis has connected itself by association with the concomitant psychic or extraneous situations, and henceforth, as a conditioned reflex, may be provoked by the mere recurrence of these originally indifferent concomitant situations.

We might say that in these cases the actual neurosis has in a secondary fashion taken possession of the psyche, but the converse may happen readily enough—i.e. the psyche may seize upon the actual-neurotic symptoms. In the first sub-chronic phase the first development is almost always hypochondria. Observation of the pathological organic reflexes and the causes of their occurrence inevitably evokes in the patient the fear that the organ in question is seriously diseased; he now regards himself—according to circumstances—as suf-

fering from heart disease or some affection of the stomach; he is afraid that he has a cancer of the stomach, or that he will presently fall a victim to failure of the heart, or apoplexy, etc. He is bound to make such a false interpretation of his symptoms, since he is not aware of their true causes, nor can he discover them by introspection. In this way the actual-neurotic becomes increasingly a victim of this erroneous association of cause and effect, which von Monakow has so aptly called "agglutinated causality." It gradually evolves into a whole system of false rationalizations, which presently affect his entire behavior, and in which he believes as in a gospel. In this way the actual-neurotic pseudophobia finally develops; that is, those systems of avoidances, commands and prohibitions which the patient imposes upon himself, and which relate to the situations in which the symptom occurred for the first time in a secondary fashion. They contribute very largely to deprive the patient of all enjoyment of life, and they gradually restrict his capacity for action to a minimum. Here I need only remind you of the pitiful victim of gastric neurasthenia, Charcot's classic *faux gastrique*, who gradually restricts himself to a true starvation diet, always dreading that this or the other dish might injure him, in order to show you the dismal end result of such agglutinated causality.

In respect of such cases—and they are extraordinarily frequent—we might very well say that for the actual-neurotic agglutinated causality does and means what the inhibitions and reaction-formations do and mean for the phobic and obsessional-neurotic. In all these cases they lead to a series of compulsive avoidances whose final purpose is quite evidently to protect the patient from the dreaded recurrence of the symptom. Yet, the actual-neurotic is suffering, not from a genuine phobia or obsessional neurosis, but from a pseudo-phobia or a pseudo-obsessional neurosis. This is substantiated by the fact that the obsessional avoidances of the neurasthenic (and the same observation holds good, as you will presently hear, of the avoidances of the anxiety-neurotic) refer to a real danger—being avoidances of the production of the symptom, on the part of the oversensitized vegetative nervous system, by means of the conditioned reflex, whereas the secondary inhibitions and avoidances of the genuine phobias and the genuine obsessional neuroses are not directed against a real danger, but an imaginary internal or instinctive danger, which

is merely transferred to an external object or situation. But more of this later.

From this stage to the development of a secondary psychoneurosis it is only a short step. The development occurs as follows: the neurasthenic symptoms, which in the self-observation of the hypochondriac are seen as through a magnifying glass, activate feelings of guilt, which stem partly from the present or the very recent past, and partly from early childhood, and which now unexpectedly make a spectral reappearance. The patient is never aware of the true associations, since the real causes of these feelings of guilt were repressed long ago; they therefore seem to him all the more mysterious, and he is all the more helpless against them in his emotional confusion.

In other words, the secondary psychogenic superstructure of neurasthenia (and the other actual neuroses) results from the fact that the neurasthenic symptoms are incorporated in pre-existent unconscious psychic complexes. From these they ultimately receive, in a secondary fashion, a corresponding content of significance—that is, a symbolical meaning, which is retained as such, even where the real actual neurosis has long vanished. They have henceforth become genuine hysterical or anxiety-hysterical symptoms. In such cases we are justified in speaking of pseudoneurasthenia.

We have a typical example of this connection of the actual-neurotic primary discomforts with anxiety and guilt complexes of the past in the tabophobia and syphilophobia which are of such frequent occurrence, and which, in neurasthenics who are suffering from sexual symptoms, very often develop from a misinterpretation of these symptoms. Yet there need not be an actual sexual neurasthenia in order that such a patient may become a tabophobe or syphilophobe; as a rule the general symptoms of the so-called spinal irritation and the psychical primary symptoms will suffice. For example, the extremely frequent neurasthenic pains in the back or pelvis are often interpreted, with the aid of agglutinated causality, as the first symptoms of an impending disease of the spinal cord, inasmuch as the layman naturally imagines that diseases of the spinal cord will announce themselves by pains in the back. On the other hand, the observation of mental fatigue, inability to concentrate, and the resulting functional disorders of the faculty of perception and the memory, etc. result in the dread of becoming insane, when the

patient, in his lay ignorance of the real etiology of the disease, almost always has in mind the so-called "softening of the brain"—that is, progressive paralysis. The connecting link leading to this false association is generally the bad conscience in respect of onanism, in the past or present, which as "debauchery" is uncritically equated with sexual debauchery in general, of which the patient has read or heard that it may eventually result in such terrible diseases as "spinal consumption" or "softening of the brain." Unfortunately the one essential point of this connection is ignored; namely, the fact that these diseases of the brain and spinal cord are the late sequelae of syphilis, and that consequently the onanist, who has never had intercourse with women, is of all people immune from these metasymphilitic affections. The fact that none the less many of these patients become victims of the obsessive idea that they are syphilitic shows that here there must exist another, deeper connection, of which the patients are totally unconscious, and that the so-called "onanism-complex" itself represents only a rationalization of this deeper motive, operating from the unconscious. All feelings of guilt experienced by these neurotics are referred to onanism and appear as though crystallized there. Further, the existence of an obsessive anxiety points to the otherwise unintelligible fact that in most cases the tabophobia and syphilophobia cannot be permanently dispelled by medical explanations—for example, by thoroughly correcting the perverse ideas at which the patient has arrived by means of agglutinated causality. But this invulnerability to logic is, as you will hear later, a characteristic feature of the phobias and obsessive ideas. As a rule, therefore, a thorough cure of these secondary psychoneuroses of the neurasthenics can be achieved only by psychotherapeutic methods (psychoanalysis), when one is not infrequently surprised by the discovery that after clearing up the secondary phobias and obsessive ideas the genuine, neurasthenic basic symptoms have almost completely disappeared. In reality they had long ago ceased to exist, but were merely simulated by the secondary psychoneurosis, which had incorporated them in its organization, so that they could henceforth be evoked as conditioned psycho-reflexes. What henceforth appears is a typical pseudo-neurasthenia with organo-neurotic or rather organo-hysterical symptoms. You see from this that there are "organo-neuroses" with a purely psychogenic basis.

The first task of mental hygiene in respect of neurasthenia—and of the neuroses in general—is one of prophylaxis. Above all, it is essential to deal effectively with the various psychic troubles which, as we have seen, may lead to neurasthenia. Thus, the “onanism anxiety” so prevalent among young people should be checked at its very beginning, by correct and unprejudiced education, which succeeds in gaining the confidence of adolescents instead of intimidating them by obscure threats. And then the apocryphal “literature of enlightenment” must be attacked by every means; including the official prohibition of such publications and legal sanctions against their authors and distributors. In the second place, legal measures must be adopted, or amended and extended, to ensure that workers, whether manual or mental, shall not be chronically overtasked, as they still are in many industries. And this simply on the ground that many latent psychoneurotics are in the long run incapable of meeting such excessive demands on their vitality as are made by the modern methods of “speeding-up,” without which certain great industries believe that they could not carry on. A method that seems to be especially harmful in this respect—if only because of its deadening effect on the mind—is the American “Taylor system,” including work on the conveyor or “moving band,” which degrades the workers to the level of a mere labor-machine, so that all psychical interest and satisfaction in his work appears to be impossible (Blum). The same remarks apply, in some degree, to our high schools and institutions of higher learning, though things seem to have much improved of late.

Sixth Lecture

The Actual or Vegetative Neuroses (Conclusion)

b) Anxiety Neurosis

Ladies and Gentlemen:

The second of the great actual neuroses which we have to consider is anxiety neurosis. The clinical pictures of this affection, which are generally highly characteristic, were formerly included with those of neurasthenia, or confused with those of the psychoneurotic anxiety states. Sigmund Freud was the first to describe the syndrome exactly and to distinguish it from that of neurasthenia. In his treatise on this disorder, published in 1895, Freud proceeded to draw a clear distinction between anxiety neurosis and the psychoneurotic syndromes of the anxiety hysterias, the phobias, and obsessional neurosis, etc., in which anxiety is a symptom. Nevertheless, there are still authors who indiscriminately describe any neurosis as an anxiety neurosis if it is accompanied by states of anxiety, or occasionally produces them. In order to avoid confusion here, it will be necessary to consider the whole problem of anxiety from a general biological standpoint, and to elucidate it.

1. If we look about us to discover under what conditions, in human beings and animals,¹ anxiety is generally evoked, we see, to begin with, that any sudden and immediate threat to life evokes anxiety. We see that this anxiety has a real basis; Freud has therefore described it as real anxiety. It occurs, primarily, in the relevant situations, without any kind of relation to special psychical contents, and is undoubtedly provoked by hormonal means—that is, by a sudden, massive discharge of adrenalin into the blood. It is therefore a sympathetic reflex. It is interesting to note that it occasionally occurs without any previous experience of the perils of a situation,

¹ In the case of the animal we can only draw the indirect conclusion—i.e. from the concomitant vegetative reflexes—that it is experiencing anxiety.

or the dangerous nature of the object involved, and even before the actual threat is in being. For example, every human being, and presumably almost every animal, will be terrified by a snake which suddenly rears out of the grass in front of him, even if he has never before seen a snake. Also, great natural catastrophes, such as earthquakes, prairie fires, flashes of lightning in the immediate vicinity, inspire both human beings and animals with immediate (a priori) anxiety. Thus, Russian research workers (Brussilowski, Simson), on the occasion of the great earthquake which occurred in the Crimea in 1927, observed that even animals and infants at the breast showed very perceptible reactions of alarm; and according to Gibson, during the earthquake at Napier, in New Zealand, even the birds at once gave signs of extreme agitation. These observations, like the physiological mechanism of the hormonal evocation of anxiety, point to the fact that in anxiety we have a so-called primal emotion in von Monakow's sense of the term as an innate and therefore objectless emotion which apparently occurs whenever the continuance of life, the ego, appears to be seriously menaced, whether the threat comes from outside or from internal processes (lack of oxygen in consequence of the inadequate functioning of the lungs or heart, etc.). The characteristic feature of such a primal emotion is that it is, by hypothesis, objectless. We may guess, from this, that the majority of primal emotions occur as concomitant phenomena of the primary hormonal evocation of an instinct (for example, sexual libido, hunger, thirst).

But in the case of anxiety it appears that we have the precise contrary, and yet there is an essential similarity. It seems to occur whenever the normal issue of an already activated primary excitation of an instinct suddenly appears to be threatened or called in question by some obstacle. In real anxiety, for example, the vital instinct is suddenly challenged, and it seems as though, owing to the sudden and forcible damming of the whole of the tremendous energy that accompanies this instinct throughout life—as though in consequence of its engorgement, this energy must suddenly transmute itself into the qualitatively very different but quantitatively equivalent primal emotion of anxiety. Or, in physiological terms, in every threat—actual or presumed—to vital interests the emergency function of the sympathetic comes into play in the form of the anxiety reflex.

The biological significance of anxiety evidently consists in the fact that by the evocation of the emergency function of the sympathetic the readiness of the organism to defend itself, or to take to flight, should be assured. But many authors have rightly pointed out that in most cases this purpose is really very imperfectly achieved, or is not achieved at all, inasmuch as anxiety very often absolutely "paralyzes" the organism, so that it becomes motionless as in hypnosis, and is rooted to the spot, and thus easily becomes the prey of the aggressor; or anxiety results in confusion, so that any purposeful reaction is futile. This criticism is certainly justified; but the inexpediency of anxiety in many cases only shows, once more, that Nature does not possess the perfection which was formerly ascribed to her by so many observers—and particularly by the theologians. On the other hand, it must not be forgotten that the immobilizing effect of anxiety is probably a relic of the "death-shamming reflex" so widespread in the animal world, which originally was assuredly one of great expediency, though in men and the higher animals it has to a great extent lost its initial importance.

2. In the neuroses we see anxiety occurring quite independently of any actual threat to life, so that here we cannot speak of real anxiety in the above sense of the term. Indeed, we have good reason to assume that anxiety is a primary symptom of every neurosis, even of the psychoneuroses, whose symptoms do not after all succeed in thrusting anxiety out of the consciousness (repressing it). If we examine the structure of anxiety in the various forms of neurosis, we see that in the actual neuroses it is quite different from the structure observable in the psychoneuroses.

The anxiety of the psychoneurotic, for example, the anxiety occurring in the phobias, has invariably a perfectly definite content, an object. The phobic is terrified of quite definite objects; for example, of certain animals which in reality are quite harmless; or of definite situations, which he therefore does his best to avoid. These dreaded objects or situations are substitutes for repressed ideas which have become unconscious and displaced. We see the same sort of thing in the anxiety of obsessional neurotics. They can always say, if questioned, of what they are afraid. In a word, the anxiety of the psychoneurotic is a differentiated complex-anxiety, i.e. a fear.

As against this, the anxiety of the anxiety neurotic has exactly

the same structure as primal, real anxiety. It is a "freely floating," contentless and objectless primal anxiety; that is, a primeval emotion in Monakow's sense. The genuine anxiety neurotic, therefore, if asked why or of what he is afraid, cannot answer the question; he finds nothing more definite in his mind than the feeling that his life is directly threatened; for example, he will say that he actually thought it was all up with him—that he was going to die, that he was going to have an attack of syncope or apoplexy.

3. But we know a third kind of anxiety, which is clearly distinguishable from real anxiety, or the anxiety of the anxiety neurotic. This is the anxiety of the conscience—moral anxiety. It evokes precisely the same tempestuous reflex phenomena in the sympathetic as "real" and neurotic anxiety; it is distinguished from the latter only by the fact that it is not pathological, but occurs as a normal phenomenon, as soon as we have done anything which is in crass contradiction to the existing laws, injunctions, or generally recognized moral codes. It is true that in many cases the legal or moral offender will first feel moral anxiety when he is threatened with discovery, exposure, and punishment, and then the anxiety seems to have extremely injurious, and under certain circumstances even catastrophic consequences for the social ego. However, it is not always the case that the bad conscience awakens only when the bad action threatens to have serious consequences; there is also, as a matter of fact, a pure moral anxiety, which makes its appearance even when no such painful consequences of the asocial action are to be feared. In this case also the moral anxiety appears to be objectless, showing that it is by hypothesis a primeval emotion. In obsessional neurosis we are confronted mainly with pathological forms of moral anxiety.

But after this biological dissertation let us return to the actual theme of the present lecture—anxiety neurosis. Only after we have investigated its clinical problems can we deal with the question of the biological nature of psychoneurotic and moral anxiety, which are bound to baffle us until we have arrived at a more precise idea of the real nature of the anxiety neurosis.

The cardinal symptom of anxiety neurosis is the acute attack of anxiety or *Kakon-crisis*, as von Monakow has aptly called it (from the Greek *kakon*=evil). The fit of anxiety generally attacks the

patient suddenly, like a lightning-stroke from a clear sky, or like a storm, and it is combined, as we have seen, with an extraordinarily violent excitation of the whole sympathico-adrenal apparatus. In the foreground there are usually the cardio-vascular symptoms and less commonly disorders of respiration, although these may occur in all such cases. From the typical difficulty of respiration which occurs in states of anxiety, and which is accompanied by a feeling of extreme shortness of breath (suffocation anxiety) the word "anxiety" itself is actually derived; it comes from the same root as the Latin words, *angustia*, difficulty, *angor*, a strangling, anguish.

The fit of anxiety develops, as a rule, like an avalanche; that is, by the operation of a vicious circle, the anxiety goes on increasing. This vicious circle comes into operation, as you will readily understand, because on the one hand the anxiety further stimulates the adrenal medulla, causing a further outpouring of adrenalin into the blood; on the other hand, it is called into being by the co-operation of the psyche, inasmuch as the sympathetic centers of the diencephalon are intensively stimulated from the cortex, so that the sympathetic reflex is still further enhanced. Then, at last, almost as suddenly, the antagonistic parasympathetic reflex intervenes and puts an end to the attack. Yet there are also protracted attacks of anxiety which continue for hours or days; one has the definite impression that in these cases the anxiety is no longer of a primary nature, but is maintained principally by the psyche: the patients are "afraid of terror." The attacks may be repeated at irregular intervals for weeks and months, unless they are checked by adequate therapeutic measures.

In the interval between two attacks a second characteristic symptom occurs, in which we may without difficulty recognize the latent anxiety neurosis: anxious expectation. The patients betray a quite general and thoroughly exaggerated anxiousness in respect of everything, and especially in respect of all their undertakings; they seem to live constantly under the threat of some approaching calamity; they see their whole future in a dismal light.

We also, as a rule, find bodily symptoms of an enhanced tonus of the sympathetic in anxiety neurotics. These are to some extent the same as in neurasthenia; insomnia, dizziness (but never actual vertigo), general irritability, hyperesthesia of the sensory organs,

anxiety neurotic are therefore refractory to psychoanalysis and cannot be further reduced. We always come back to the one, monotonous, contentless and meaningless affect of anxiety. Why then should this primary anxiety attach itself to definite situations? How does this situation anxiety come about? It may come about in three different ways:

a) First, through the mechanism of the conditioned reflex (cf. the next lecture). The situation in which the first impressive attack of anxiety was experienced inevitably provokes attacks of anxiety on other occasions: it has become a signal for the sympathetic reflex, just as for the trained dog the "food note" is the signal for the conditioned salivary reflex.

b) In other cases the connection between the anxiety and a definite situation, or an impending situation (which is forthwith avoided) occurs by way of von Monakow's "agglutinated causality," which is nothing more than a psychically conditioned reflex. For example, one of my patients, a sexagenarian, experienced his first attack of anxiety after a lively evening in a tavern, when he drank more wine than usual. From this time onwards he had a phobic dread of alcohol, and even of the social gathering in the tavern; henceforth he avoided his *Stammtisch*,³ neglected his friends, and became a solitary, because he had developed the firm conviction that his rather unusual indulgence in wine was responsible for his "heart attack."⁴

c) Lastly, the situation anxiety may also derive directly from the anxiety neurotic "actual" symptoms. The woman who has had an attack of anxiety in the street, when she experienced the typical locomotory dizziness with the feeling that her legs were giving way, will now entertain the fear—not without a certain justification—that in her next attack, if it should take her by surprise in the street, she would collapse altogether, and in this helpless condition would be run over by a car.

³ Table reserved for regular customers in Continental restaurants. Also, and primarily, the circle of friends assembling at such a table.

⁴ As a matter of course, in such cases as this—that is, when elderly people are concerned—an organic affection of the heart, perhaps an incipient sclerosis of the coronary arteries, must first of all be definitely excluded. I will therefore stress the fact that this patient, before he came to me, had been repeatedly and carefully examined by heart specialists, and that all these examinations resulted in a diagnosis of a pure "cardiac neurosis." Anxiety neurosis is commonly treated by heart specialists under this designation.

Again, in the hypochondria of the anxiety neurotic we have really nothing more than the establishment of false causal relations—that is, an agglutinated causality—since the patient knows nothing as to the true nature of his fits of anxiety, but erroneously believes them to be “heart attacks.” This at once explains the fact that the primary hypochondriacal broodings of these patients invariably turn upon their misgivings as to the condition of their hearts or their cerebral arteries. This mechanism of the anxiety neurotic’s hypochondria is thus of a different, and still more primitive nature than in neurasthenic hypochondria; it is less overlaid with complexes than the latter, but appears to be primarily conditioned by anguished expectation plus agglutinated causality. It is also in itself an actual-neurotic symptom. The psychical primary symptom of anxiety has here “passed through the mill of agglutinated causality” (von Monakow). The patient’s fear that he is suffering from heart disease, or is liable to have an apoplectic stroke, is in most cases merely a false interpretation of the primary feelings of anxiety; in the beginning, at all events, there is no unconscious sense of guilt behind it, as in the tabophobia of the neurasthenics (who as the result of spurious “enlightenment” believe, on observing their symptoms, that the disastrous consequences of onanism are now declaring themselves!). In short, the hypochondria of the anxiety neurotic is nothing more than the psychic reaction to the observation of the alarming anxiety reflexes in an attack, and does not for the time being, undergo further psychical elaboration.

However, such a psychical elaboration, which leads to the secondary development of a genuine psychoneurosis, occurs almost inevitably in the course of an anxiety neurosis. As soon as it has become more or less chronic, every anxiety neurosis covers itself, so to speak, with a secondary psychoneurosis, which may then persist for years, long after the original actual neurosis has disappeared. The most usual secondary formation is a genuine anxiety hysteria or an obsessional neurosis. The mechanism of this development is much the same as in neurasthenia. The hypochondriacal pseudophobias are associated with old feelings of guilt, and are thus, so to speak, psychically underpinned and fixed; it is as if the patient were to say to himself: This is the punishment for my sins, for my wickedness! Since “actual” anxiety, as you will presently hear, is caused

by the damming of libidinal excitation, this mode of development is as good as physiologically traced beforehand. In almost every obsessional neurosis, and certainly in every anxiety hysteria, we therefore find, at the origin, certain symptoms of an actual neurotic, usually an anxiety neurotic nucleus. But even a later overgrowth of genuine conversion hysterias is among the possibilities. Their points of origin are naturally the motor symptoms of the anxiety seizure. But we can readily understand the combination with anxiety hysteria, where the actual-neurotic phobias—for example, agoraphobia, the dread of attacks of giddiness, or of falling—acquire a secondary psychic significance, a symbolical meaning. In this way it becomes the dread of sin. The mechanism of this secondary, unconscious “psychologizing” is always the same: the anxiety neurotic symptoms have proved to be suitable for representing the repudiation and punishment of an unconscious instinctual demand. Just think, for example, of the familiar expressions, “a fallen girl,” “a fallen woman.”

The pathogenesis of anxiety neurosis is comparatively simple—at all events, as far as we can see at present, simpler and more uniform than the pathogenesis of neurasthenia. It follows in every respect the etiology first discovered by Freud, which was mentioned in the discussion of neurasthenia (p. 99). It can be characterized by the phrase, damming up of libido. An anxiety neurosis may always develop if violent sexual excitations, at the very last moment—that is, shortly before the orgasm—are checked, so that the libido is not discharged; in short, so that the libido, or the libidinal hormones in the blood and nervous system, continue to accumulate. A great many objections have been made to this theory, all on much the same lines. On the one hand, the factor of the damming up of libido could by no means be proven in every case of anxiety neurosis; on the other hand, various other causes of this affection could be indicated: such as previous debility due to bodily disorders (especially infectious diseases), an unspecific psychic shock—for example, the alarm caused by an accident—and finally, congenital disposition, inherited stigmata, and the like. As regards the first objection, that what Freud has declared to be the etiological factor, the damming up of libido, could by no means always be established as the “cause” of anxiety neurosis, we have to bear in mind that here we are dealing with

extremely delicate matters—that is, with sexual practices which belong to the sphere of the utmost personal secrecy, and are therefore only most unwillingly confided even to the physician, however urgent his questions. It is much the same with tabes or progressive paralysis; many patients who suffer from these affections will obstinately deny that they have ever suffered from syphilis or any sort of sexual disease. Nevertheless, no physician will today give the slightest credit to such assurances if he has convinced himself, by clinical examinations, and by a positive result of the Wassermann reaction, that he is actually dealing with a metasyphilitic affection. It constantly happens, too, that an adolescent girl, whose periods have ceased, and in whose case the physician, to the general dismay, cannot do otherwise than diagnose an incipient pregnancy, will obstinately deny that she has ever had sexual intercourse. But we have yet to see the gynecologist who would therefore assume that in this case there was to be a repetition of the miracle of virgin birth (Freud). I myself, hitherto, in all the cases of anxiety neurosis which I have been able to explore minutely, have established the factor of damming up of libido and can therefore confirm the Freudian theory of anxiety neurosis. As regards the second objection, as soon as we look more closely into the conception of the “cause” we shall see that it does not in any way invalidate the Freudian theory. In clinical pathology we had long ago to discard the habit of talking of the “cause of a disease.” No disease can be referred to a single cause; it is always the result of a whole series of conditions, each one of which must be fulfilled before the disease can break out—that is, become manifest. Among these conditions some are indispensable and may therefore be described as essential conditions, since without their existence the disease in question would be simply unthinkable; other conditions are of a facultative nature, inasmuch as if they are present they favor the development of the disease; but they are not indispensable. Among these, for example, are such pathological factors as a constitutional predisposition, or the various so-called incidental causes. For the outbreak of tuberculosis, for example, the presence of the tubercle bacillus is indispensable; it represents the essential condition of the acquisition of this disease. But we have long known that almost every human being has at one time or another absorbed tubercle bacilli, or is still harboring them somewhere in his

organism, yet he has never suffered from actual tuberculosis. Before the disease can break out the bacillus in the organism must find a favorable soil; and further, the organism's powers of resistance must be diminished by definite incidental causes; such as exposure to cold, or catarrh. So the damming up of libido is only one condition, which must be present in every case before the disorder can declare itself; on the other hand, a particular constitution may be among the essential conditions, or even a congenital predisposition, since many people are able to tolerate such damming up for a long while without any deleterious consequences, although in other subjects it would have provoked severe attacks of anxiety neurosis. Even a certain physical debility may play its part in the outbreak of a disease, inasmuch as it provides the acquired disposition to the disease. This may explain the fact that anxiety neuroses are particularly frequent after serious infectious illnesses; for example, after influenza. Here the general debility has apparently reduced the organism to a condition in which it is especially unable to tolerate disturbances of the hormonal equilibrium, and the damming up of libido is such a disturbance. Also, according to Freud, in such debilitated conditions a considerable disproportion may exist between the reawakened sexual desire and the physical power of satisfying it, which must result in the damming up of libido. That the damming up of libido must be an essential cause of anxiety neurosis is also shown by the fact that this affection occurs only in potent men—or men whose sexual metabolism is normal—and in non-frigid women; never in frigid women and bodily or physiologically impotent men. As for the incidental causes, they evidently operate in a critical fashion by overburdening the vegetative system; for example, under certain circumstances alcoholic excesses, or errors of diet, may have this effect; and also particularly exhausting work, which overloads the sympathetic, in a weakened condition of the body. But the damming up of libido must always be added as *conditio sine qua non* to these operative factors, in order to evoke the first attack of anxiety. The physiological mechanism by which the massive enrichment of sexual hormones in the blood overexcites the sympathico-adrenal system so that the attack is produced has not yet been minutely investigated.

After what has been said you can easily deduce for yourselves the more intimate conditions under which the libido is obstructed, and

by which the disposition to anxiety neurosis is created. They are, above all, frustrated sexual excitations of all kinds, by which the preliminary desire is abnormally protracted, and the end of desire, the orgasm, prevented. So we see anxiety neurosis occurring with special frequency in women whose husbands practice coitus interruptus, so that the female partner cannot receive satisfaction; all the more so if the husband is not very potent, and perhaps suffers from ejaculatio praecox, so that the act, in any case unsatisfying, is even further curtailed. But even chaste young women and children may under certain circumstances suffer from anxiety neurosis, if the growing or adolescent child is suddenly and brutally brought into contact with crudely sexual facts. The experience is more than their psyche can deal with, and a violent and acute conflict ensues between the sexuality unconsciously aroused, and morality. If the libidinal excitation is very strong—that is, if it becomes imperative—the mechanism of repression breaks down: the libido has no longer time to attach itself to a displacement-substitute, and in consequence of the moral repudiation (“inner refusal”) there is an acute damming up of libido, and anxiety neurosis. Not infrequently, moreover, we see anxiety neuroses appear in both sexes during betrothal, when the two lovers stimulate each other and indulge for hours at a time in every imaginable kind of physical tenderness without venturing on the last surrender. Also, after the sudden abandonment of a hitherto regularly practiced sexual activity the conditions of an anxiety neurosis are present: For example, if a young wife suddenly loses her beloved husband (anxiety neurosis of widows), or if a youth who has hitherto regularly satisfied himself through onanism comes upon one of the infamous pamphlets which I have described, and in terror of the allegedly threatening consequences of self-abuse suddenly renounces the practice. But even old men may under similar circumstances become victims of anxiety neurosis, if they experience an unhopedefor second springtide, against which they believe they must fight on the grounds of morality and self-respect. This, for example, was the essential cause of the case of anxiety neurosis mentioned on p. 120. Finally, I have even observed an anxiety neurosis in a case of impotence of purely mechanical origin, i.e., brought about by mere mechanical obstruction while the internal secretion and consequently the libido was undiminished. This was the case of a man in

the prime of life, in whom, despite the extirpation of a tuberculous kidney, a descending urogenital tuberculosis with epididymitis and finally semicolliculitis had developed. Since the appearance of the last complication, which resulted in total *impotentia erigendi et generandi*, and this from purely mechanical causes, a severe and acute anxiety neurosis developed, with typical pseudophobias.

You see, then, in all these cases the same thing happens: If the sexual instinct, at the last moment—that is, during its last phase of realization—is suddenly checked or frustrated, the dammed-up libido is transformed into anxiety. And you know, further, that consequently the sexual anxiety adapts itself automatically to the general biological condition, which in the beginning we discovered to be the universal condition of the development of anxiety as a primal emotion. It appears whenever the normal issue of an already activated primary instinctual excitation suddenly appears to be threatened or prevented by an obstacle.

Finally, we may conclude that the same condition holds good of moral anxiety. For here again we see anxiety appear if an instinct is suddenly jeopardized in its further operation and fulfilment. This jeopardized instinct is in this case either the moral counter-impulse of the superego which operates against the unlimited indulgence of the primitive egoistic instinct (for by the evil action even this moral instance is affronted and jeopardized); or, where anxiety makes its first real appearance as a reaction against threatened discovery and punishment, it is nothing more than a special form of real anxiety; but then it should not really be described as moral anxiety. In any event it is a fact that threats to the moral existence—for example, the threatened discovery of misdemeanors with the inevitable sequel of public exposure and disgrace and social outlawry—may provoke the gravest states of anxiety, which cannot be in any way distinguished from the anxiety caused by the frustration of sexual libido. We must therefore realize that in certain cases, apart from the frustration of sexual libido, the frustration of “social libido” is a second possible source of anxiety neurosis.

c) Fright Neurosis

Just as neurasthenia has its “accident-neurotic” analogue in concussion neurosis, so anxiety neurosis has such an analogue in “fright

neurosis." But in this case we can only speak of an analogy, since in "fright neurosis" the essential etiological condition—the damming up of libido—is lacking. It is due, rather, as its name denotes, to the psychic shock of fright, which, by way of the cortex, and the vegetative brain centers, evokes a serious disturbance of equilibrium in the vegetative nervous system, especially in the sympathico-adrenal system. This effect is in principle organic: that is, the symptomatology of "fright neurosis" occurs directly, eluding any conscious consideration or reflection. The organic-vegetative nature of the syndrome was first established by the classic investigations of Stierlin (1911), and was later confirmed beyond any possible doubt by a great number of clinical and even pathological and anatomical data.⁵ Occasional observations of the development of diabetes, Basedow's disease, and paralysis agitans occurring in consequence of violent emotions of fright, already pointed to the same conclusion; indeed, in rare cases the mere effect of fright may even cause death from vasomotor paralysis (Bernhard, Fröhlich), though only where there was a previous history of myocarditis. Many authors have established the fact of peculiar alterations in various organs controlled by the sympathetic resulting from the effects of fright. In the light of these facts the opinion of many investigators who still impute fright neurosis to hysteria is now finally refuted. This opinion is due to the old confusion between "psychic" and "psychogenic," or, as one used to say, "ideagenic"; a confusion of which we spoke in our previous lecture on neurasthenia. It is true that in fright neurosis, as in all the actual neuroses, a secondary psychic superstructure very often makes its appearance; but this does not affect the essential fact that the primary symptoms here are not psychogenic, but are or were of a somatogenic (neuro-vegetative) nature. The superimposed psychoneurosis is in my experience usually a hysteria or an anxiety hysteria. The secondary psychic fixation of the primary vegetative fright syndrome is favored by the fact that in connection with the organic symptoms there is very frequently—perhaps generally—even in the initial stage, an appearance of hysteriform cerebrospinal symptoms, especially of a motor character (fright hysteria): paralysis in the sense of monoplegias and paraplegias, contractures, pathological altera-

⁵ Bruns, Thompson, Horn, Schuster, Bing, Libmann et al.

tions of carriage and tonus, disorders of speech and voice, etc. Here we are evidently confronted with more or less preformed, old phylogenetic and ontogenetic reflexes of protection and defense (Sommer), which have their anatomical basis in the extrapyramidal system. That this is the case is shown by the brilliant investigations of Moro, who describes typical fright postures and fright reflexes in children at the breast, which can be provoked, for example, by violently striking their mattress in an invariable and stereotyped manner. Charcot, and after him Breuer and Freud, demonstrated long ago that the motor symptoms of hysteria can readily be conceived as fixed movements of expression. In fright hysteria we can to some extent observe this mechanism *in statu nascendi*.

In many cases the effect of fright does not appear immediately after the accident, but only *post festum*, when the patient has subsequently realized the deadly peril to which he was exposed (Sperling, Bing, Meier-Müller). Some authors have generalized from this fact, and have drawn the conclusion that the so-called accident neurosis, with all the manifold forms which it assumes, has its origin in a primary affect of fright; that is, it is said to be a real fright neurosis. This, I think, is overshooting the mark; fright neurosis or fright hysteria is only one special form of traumatic neurosis, and only for this form does the above etiology hold good. For example, it is out of the question, or at least highly improbable, that an accident neurosis should really emerge from a fright neurosis where the patient has sustained concussion of the brain with protracted unconsciousness, or where the neurosis developed only after a delay of several weeks or months.

A pre-existing disposition does not appear to be absolutely necessary for the development of a fright neurosis or fright hysteria, although according to Bing it can be demonstrated in 75 per cent of all cases (latent or manifest anxiety neurosis, psychosexual infantilism, hysteria, more rarely psychopathy). Wartime experiences of so-called "shellburst neurosis" (shellshock) have shown, on the other hand, that previously healthy, strong peasant boys with primitive mentality may fall victims to fright neurosis or fright hysteria under the overwhelming impression of catastrophic events. The same thing has been observed in savages.

The symptoms of acute fright neurosis have been described by all writers in the same terms. Immediately after the trauma general psychic deterioration to the point of protracted states of inertia and confusion, local and temporal disorientation, often with striking euphoria; following on this a neuro-vegetative syndrome with a cardio-vascular symptom-complex in the foreground. The fright trauma, which during the impact could not be psychically controlled, recurs every night in terrifying dreams, and in this way is gradually "abreacted"—that is, elaborated and as it were neutralized. The symptoms are usually of a temporary character; in most cases the effect of shock passes off in a few days or weeks, or at most in a few months, unless a secondary hysterical fixation should intervene.

The mental hygiene of anxiety neurosis is largely congruent, as will be readily understood, with the mental hygiene of the "sexual problem" as a whole. One has to find ways and means of effectively preventing the manifold occasions or possibilities which may give rise to the pathological damming up of libido. A complete solution of this problem, however, seems almost impossible under our modern conditions of civilized life; generally, all that we can do is to apply ourselves to the psychotherapy of the damage already inflicted. However, in this province of mental hygiene a great deal might still be done in the direction of the prophylactic enlightenment of persons who, in respect of their special circumstances (betrothal, widowhood) must already seem in danger of anxiety neurosis, and disposed to it.

Such instruction, as a matter of fact, should be extended also to the physicians, for it must, unhappily, be confessed that the clinical picture of anxiety neurosis, and its etiology, is still practically unknown to wide circles of the medical profession. Patients suffering from anxiety neurosis are still only too frequently diagnosed as sufferers from "functional cardiac disorder," or merely from "nerves." They are simply given medicine, or at best are treated by the psychotherapy of "talking them out of it"; that is, their complaint is not taken quite seriously. In most cases, therefore, there is a failure to apply what is in the long run the only effective therapy, which consists in determining, by patient exploration, the special form and occasion of the damming up of libido which in individual cases leads

to anxiety neurosis, and to explain the connection fully to the patient. Even as a psychological adviser the family doctor could often contribute to the prevention—that is, to the prophylaxis—of anxiety neurosis, if only he himself were clearly aware of the relevant connections.

Seventh Lecture

(2) The Neuropathological Theories of Neurosis, Especially of Hysteria

Ladies and Gentlemen:

Even the great French clinician Charcot, whom we have to thank for the decisive progress made in the theory of hysteria, originally believed that hysterical disorders must be referable to some sort of material alterations in the tissues of the brain. But his own researches into the effects of hypnotic suggestion, and their astonishing influence over physical processes, soon cured him of this vague suspicion, and resulted in his conception of the purely psychogenic nature of hysteria, of which I spoke in my second lecture. On the other hand, a little later (1888) the celebrated German neurologist H. Oppenheim turned back to Charcot's original ideas, and once more postulated, at least for the so-called traumatic neurosis, an organic basis in the form of minute "molecular" alterations in the substance of the brain—a theory which he further developed during the World War of 1914-1918. Yet he convinced only a few clinicians of the truth of this theory, and only for the time being, for under the overwhelming impression left by the experiences of the first World War, which furnished an actual mass experiment in respect of the so-called "war hysteria," the majority of physicians had gradually turned away from Oppenheim, and had returned to the psychological theory of the neuroses.

On the other hand, the eminent French neurologist J. Babinski had meanwhile achieved a considerable limitation of the old notion of hysteria—an "amputation of head and limbs," so to speak, inasmuch as he declared that in future only those nervous disorders must be described as hysterical which

1. could be cured by purely psychical measures,
2. and could therefore be evoked at any time experimentally, by suggestion, and

3. could be voluntarily imitated in a completely identical form.

Symptoms which satisfy these criteria were designated by Babinski as "pithiatic" (from *péitho*, I persuade, and *iatós*, curable); and this narrowly circumscribed psychic clinical picture he described as pithiatism. All the other symptoms of hysteria, however, which can neither be cured by psychotherapy alone (as Babinski believed) nor evoked by suggestion, nor voluntarily imitated (susceptible of simulation) have, according to Babinski, nothing to do with hysteria, but are conditioned by organic alterations in the nervous system. This is especially the case with all trophic and vasomotor disorders, which arise under the influence of the vegetative system—puffiness of the skin (edema), red patches on the skin (erythema), bleeding of the skin and other circulatory disorders, such as coldness of the skin, cyanosis, etc. In short, these vegetative symptoms of hysteria are not psychogenetically determined; they are rather due to organic reflex disorders in the sympathetic—for which in 1917 Babinski and his pupil Froment coined the expression "physiopathic disturbances of a reflex order."

The Roumanian neurologist Marinesco with his collaborators (Nicolesco, Jordanesco, and especially Radovici), went a step farther in the reshaping of the old conception of hysteria, inasmuch as these authors denied the psychogenic nature of most of the cerebrospinal symptoms of hysteria, such as paralyses, contractures and other like disorders, and above all the hysterical tics (torticollis, blepharospasm, etc.), referring them rather to organic lesions in definite regions of the brain, especially in the grey central nuclei, and of these, more particularly the lenticular nucleus. They proceeded from the observation that in postencephalitic Parkinsonism—that is, in patients who had suffered from "sleeping sickness"—encephalitis lethargica—motor symptoms of a very similar nature sometimes appeared—so-called hyperkinesias—and that the autopsy in these cases always revealed foci in the lenticular nucleus. They accordingly speak of a hysteroparkinsonism, and Radovici even goes so far as to postulate a direct similarity of nature between the postencephalitic and the hysterical tics. But even in catatonia, a form of schizophrenic mental disorder, hyperkinesias and disorders of tonus and posture like those of Parkinsonism occur (catatonic rigidity, catalepsy, spasmodic torsions, *flexibilitas cerea*, tics), and many authors do not hesitate to

relate this psychosis also with lesions in the region of the extrapyramidal system—that is, of the stem-ganglia of the brain. The same theory was recently postulated in respect of melancholia, on account of the affective and attitudinal rigidity in the melancholic stupor, and finally, even compulsion neurosis could be included in the category of extrapyramidal disorders, since its symptoms could to some extent be described as “psychic tics or torsion-spasms”; just as one speaks—of course, in a far-fetched way—of “intellectual or spiritual acrobatics.” In this way the majority of the great psychoneuroses were included among the organic affections; little remained but the phobias, for which one would doubtless have to discover also a material basis, on account of their close connection with anxiety.

In Switzerland the neurologist G. de Morsier in particular has adhered to this purely organic conception of the classic hysteria, and of the neurasthenic syndrome, at least, in so far as they appear after a trauma of the skull, however slight this may be—for example, without the slightest signs of concussion of the brain. He interprets the various forms of the so-called traumatic neuroses, which have hitherto been regarded by the overwhelming majority of authors as psychogenic hysterical manifestations—or as vegetative neuroses occurring in connection with the mental agitations of the fight for a pension—consequently as partial phenomena of an organic, structural lesion of the diencephalon, and with that he relegates the whole of these psychogenic syndromes to the category of “traumatic encephalopathy”—more especially as a form of diencephalosis.

Let us now ask ourselves whether such arguments in favor of an organo-neurological conception of the psychoneuroses stands up to criticism better than the endocrine and patho-physiological theories, which were expounded in the fourth lecture. This question, in my opinion, has to be answered by a decided negative.

As regards the vegetative manifestations of hysteria, which Babinski wished to distinguish, as “physiopathic troubles of a reflex order,” from hysteria as a psychogenic affection: there are, of course, sympathetic disorders of a purely organic origin, which are dependent on affections of the sympathetic cord, the sympathetic cells of the spinal ganglia, or the peripheral sympathetic nervous plexuses. A great proportion of the so-called vasomotor-trophic neuroses (Cassirer) belong to this category. On the other hand, it would be quite erroneous to explain all the vegetative symptoms of hysteria as organically conditioned, merely because there are such things as purely organic affections of the sympathetic system, and to attempt to deny

flatly their psychogenetic origin. This would entail declaring the very symptoms which have always been accounted among the classic signs of hysteria—the hysterical stigmata—to be non-hysterical. Now the view that symptoms which cannot be simulated cannot be of psychogenic origin is certainly quite untenable. It is somehow derived from the erroneous supposition that the hysterical symptoms spring from conscious ideas, impulses of the will, etc.—hence, it is imagined, the often magical rapidity with which they can be induced to disappear by suitable counter-suggestions (especially in hypnosis), but also, under certain circumstances, by a spontaneous change of mind on the part of the patient. If this conception were correct there would be no difference, in principle, between hysteria and simulation, and those would be right who in practice have always tacitly or openly regarded the two as synonymous. In reality, however, the hysterical symptoms, like the symptoms of the other great psychoneuroses, are the result of morbid instinctual processes which occur deep under the threshold of conscious thought and will, in the realm of the biological unconscious, the id. The artificial restriction of the notion of hysteria to consciously imitable phenomena springs, I think, from a gross undervaluation of the “power of emotion” over bodily processes; of which Kant was already well aware. Today, indeed, people seem to have completely forgotten what is possible in this connection, and what does really occur: from the evocation of severe contractures and paralyses lasting for months and years, with total anesthesia, to the momentary or even fairly lasting influencing of nearly all the neuro-vegetative processes, including menstruation, metabolism, the composition of the blood, the temperature of the body, etc. According to Foerster, Altenberger and Kroll (cit. by Bing) even in hypnosis alterations of the sensory chronaxia can be produced; that is, processes which are totally withdrawn from any conscious influences in the sphere of the will and imagination.

Recently, a Belgian neurologist, Jean Titeca, has shown that even the painful stimulation of skin areas affected by hysterical anesthesia does not in the least influence the diagram in electroencephalography: while on the stimulation of a normal skin area, an immediate interruption of the alpha-(ground-) waves (“still-stand-reaction of Berger”) followed by the incidence of a different kind of waves (the so-called beta-waves), takes place, nothing of the kind is observed in

hysterical anesthesia; the alpha-waves still persist as if no stimulation at all had occurred. This evidently means that in hysterical anesthesia the painful excitation does not reach the sensory cerebral cortex but must have been blocked somewhere in the subcortical structures on its way from the sensory thalamic nuclei to the cortex. Therefore, hysterical anesthetics (and probably all the other hysterical phenomena) are brought about by a veritable physiological process, and can no longer be described as a result of wilful simulation. However, quite recently two French authors, Boisseau and Gastault, succeeded in showing by a rather heroic self-experiment, that merely by extreme self-control and complete detachment of mind from the painful sensations, one may be able to check even the electroencephalographic changes, consequent upon painful sensations. The authors conclude from their experiments that genuine hysterical symptoms also are caused in the same way; that is, that they are entirely "simulated." But this conclusion, I think, is quite unacceptable, and that for several reasons: First of all, it seems difficult to credit rather simple and weak-minded hysterical people with such an extreme power of will-control as was evinced by the two French medical men, who, it should be noted, were anxious to confirm by their experiments the doctrine of their honored master Babinski; and secondly, the French neurologists knew in advance, and were therefore prepared for what would be done to them, while the hysterics tested by Titeca were completely ignorant of what would happen to them when the experiment was started. They had had no opportunity of preparing themselves for a supposed act of "simulation."

To mention only one of the miracles of hypnosis, it has long been known that, by hypnotic suggestions, the beginning of the menstrual period on a certain day or even at a given hour can be determined beforehand, or it can be delayed for several days. Finally, I may remind you here of the "conjuring" or "charming" of warts, which a few weeks after the conjuration rapidly shrink and finally disappear. The physician Bonjour of Lausanne long ago obtained similar results through hypnosis, while the Zurich dermatologist Bloch obtained them through mere waking suggestions. As a result of his experiments he resolved to banish the medical therapy of warts from his clinic, and to replace it by the purely psychical method of treatment.

Today, when the organic explanation of all the processes in hysteria has become so popular, all this appears to be totally forgotten: it is as though the classic works of Charcot, Bernheim, Forel, Dubois, Janet, Breuer, and Freud had never been written! Indeed, people have evidently also forgotten that even affective excitations occurring in full waking consciousness are regularly accompanied by reflex processes in the vegetative nervous system, some of the affects being conjugated rather with the sympathico-adrenal system, and some with the autonomous system. You may perceive from this how far the sphere of these vegetative nervous processes may extend when they are coupled—as is actually the case in the psychoneuroses—in a secondary manner, as conditioned reflexes, with a host of external signals—connections which have been acquired by every patient in his individual past. And these signals do not even need to penetrate the consciousness, to say nothing of becoming accessible to conscious consideration. For example, there is actually an unconscious (repressed) anxiety, which betrays itself only by the accompanying vegetative reflex, the so-called “anxiety equivalent” (Freud, Stekel). And in the classic hysteria, as we shall see, just those pathogenic affects which correspond to the repressed instinctive impulses and their “counterpoises,” are completely withdrawn from the consciousness of the patient and bound up with the symptom; hence the “*belle indifférence des hystériques*” which Charcot had noted in many of these patients. But that the repressed affect, although it can no longer be released by the objective notion appertaining to it, must nevertheless be present somewhere and actually operative, can be established by means of the psychogalvanic reflex phenomenon (Veraguth). But more of this later.

Again the objection which has been raised against the psychogenic nature of many hysterical and other psychoneurotic symptoms, that they (allegedly) cannot be influenced by psychotherapeutic treatment and are therefore incurable, proves on closer examination to be invalid. In the first years of the World War of 1914-1918 this objection was addressed by many authors to those who regarded the very serious disorders following upon so-called “shell-shock” as psychogenic manifestations. But what is meant by the words “incurable by psychotherapy”? If such a patient did not react and recover his health after a few hypnotic sessions, the physicians were already convinced

that they were dealing with symptoms of a material lesion of the brain or spinal cord. As though the majority of psychoneuroses did not as a rule offer a tenacious and obstinate resistance to our psychotherapeutic endeavors! One must not forget that in those days, when Babinski advanced his theory of "pithiatism," and believed that he ought to exclude these pseudoneurological and vegetative manifestations from the now restricted concept of hysteria, the most potent instrument of psychotherapy known to us today—psychoanalysis—was practically unknown, not only in France, but to the majority of physicians in all parts of the world. Who, among the champions of the organic genesis of such pathological conditions, had ever gone to the pains of subjecting such a patient to months of psychoanalytic treatment? Since then, of course, a succession of cases has been published in which even severe traumatic and war neuroses were successfully treated by purely psychotherapeutic methods—at all events the patient got rid of his symptoms and even dispensed with the usual pecuniary indemnification (Simmel, Abraham, Landau, Lennon, Weizsäcker, Staudacher, Peine, Fitzgerald, Sommerville, Herbert, Pearson, Laubenthal, Meier-Müller, Sperling, Eliasberg, Blum, R. Brun, et al.). I myself have twice had occasion to treat neuroses following upon traumata of the skull by psychotherapeutic methods; in one of the two cases a cure was effected after a few sessions. Also, years ago I cured, by psychoanalysis, a severe case of hysterical torticollis in a butcher, which had persisted for some months, and recently a similar case in a lady,—that is, one of those severe cerebrospinal symptoms which today are referred by Marinesco and his school to organic alterations in the extrapyramidal system. Some years ago, too, I saw an analogous case—a very severe torticollis which had persisted for years, and which, during psychoanalytic exploration, completely disappeared within a week, while at the same time catatonia declared itself; and after the psychosis had cleared up the torticollis promptly appeared again. This case, at all events, tells us that the pathological processes in the tissues of the brain which Marinesco assumed to be the cause of tics and spastic torsions need not be irreparable; that they are indeed in principle reversible, and in this point at least do not differ from the analogous disorders in the hysterical patient. Again, in respect of sufferers from war hysteria, with their often unusually severe "Parkinsonian" symptoms,

this interesting observation was made by a great variety of authors: that in the case of any sort of intensive psychic shock (hetero- or autosuggestive) the massive phenomena often disappear suddenly. These often sudden recoveries, occurring spontaneously or as the result of suggestive shock (and here one thinks of Kaufmann's treatment of war hysteria by strong electric currents) are in my opinion simply irreconcilable with the assumption of organic structural lesions in the brain.

So, as regards the pathophysiological interpretation of these analogies between the Parkinsonian symptoms and certain hysterical manifestations, we must agree unreservedly with Bing's criticism. In one of his treatises on this question (1936) he spoke, with justification, of an impermissible overstraining of the neurological conception. According to him, this hypothesis, which would include hysteria among the organic affections, is not only entirely unproven, but quite improbable. The truth is, he considers, that the hysterical patient utilizes, for the realization of his unconscious motives, certain ready-made physiological patterns which he finds in his palaeostriatum. He reactivates these phylogenetically ancient kinetic automatisms, while screening them from the inhibitory influence of the more recent elements of the putamen and nucleus caudatus, which on their side stand under the direction of the cerebrum. The relevant hysterical automatisms are then released in just the same manner under the impetus of the unconscious motive, just as W. R. Hess was able, in cats, to bring the intercalary points of the hypothalamus into action by electrical stimulation. However, you will have heard the essential facts concerning these interesting experiments in stimulation, and the modern theories of the functions of the diencephalon, during the first lecture, and I will ask you to turn to the passages in question (pp. 21-24). At the same time, you must not forget that the sensitive points in the diencephalon from which such automatisms can be set in operation are by no means the "motor center," the brain center itself in which these compound kinetic trains are "localized" (they would be much too small for that); they are rather merely intercalary points through which—as at the throwing of a switch—the whole compound reflex chains comprising the palaeostriatum, the betweenbrain, the midbrain, the cerebellum, and finally, the spinal cord, are set to action, or through which—in the case of symp-

toms of defect, such as disorders of sensibility—they can be automatically cut out. Only thus can we explain how these “false connections” can be broken by psychic influences—and by psychotherapy—that is, by restoring the connection with the critical analyzing function of the cortex—just as suddenly as they were established under the influence of unconscious impulses and the damming up of the critical function of the cerebrum.

We see, then, that the fact that the great hysterical syndromes correspond in their character with certain phylogenetically ancient kinetic automatisms which occur in the ganglia of the brainstem is by no means inconsistent with a psychogenetic origin. But we must clearly distinguish between the technical explanation of a symptom by its innervation and the causal-genetic explanation. The palaeostriatal automatisms which Marinesco and his pupils have shown to be the basis of the great cerebrospinal symptoms of hysteria, hysterical fits, cramps, spasms, contractures, tics, etc. merely explain the innervation mechanism of the hysterical symptoms of which the id, the unconscious of the hysterical patient, makes use in the realization of his manifestations. But the motives which set these automatisms in action are purely psychical, and are subject, in their development, their meaning, and their operations, to the archaic laws of the unconscious, which is ruled by the instincts; that unconscious which Freud, in the course of his career, has explored and revealed, step by step.

This has disposed of a final and general objection which has been raised by many authors, and only recently again by Riese, against the psychic origin of many psychoneurotic symptoms, especially in discussing the so-called accident neuroses. They argue that “purely functional” disorders simply do not exist, and could not exist, since in the last resort all processes in the organism, and thus all functional disorders in the central nervous system, must have their material basis. For it really needs no special perspicacity to see that this argument is essentially an argument for psychophysical parallelism. Of course all the processes in the nervous system, even the psychoneurotic processes, have somewhere a material physiological basis; only, this is true also of all normal physiological processes—for example, of the normal act of walking. So, if we see a patient who after a harrowing experience is suddenly unable to walk, and if,

further, on the most minute neurological examination of this patient we cannot ascertain the slightest reflex disorders or other signs which would point to a structural lesion of definite paths or centers in the brain; and if we then succeed in curing the inability to walk by psychotherapeutic influences—curing it in a day, or even in an hour (for example, in one hypnotic session), then in the absence of a more exact patho-physiological definition we are justified in describing this disorder of locomotion as a purely functional, psychogenic manifestation; that is, as hysterical abasia. Indeed, we are compelled to so describe it; and this does not affect our firm conviction, that this hysterical manifestation must make use, for its realization, of definite paths in the brain, of definite preformed reflexes in the central nervous system, just as all normal innervation processes must do.

The champions of the organic theory *à tout prix*, on the contrary, refer to the results of the modern researches into the betweenbrain, which I have already described. As a matter of fact, the results of research have to a certain extent dethroned the cerebral cortex as the seat of the psyche, having shown that it does not play the sovereign rôle in the integration of the total output of the brain, as one had hitherto imagined, but that the cortex is itself an organ subject to subcortical processes, on which its functional preparedness seems largely to depend. Since it has been possible, by the electrical stimulation of certain points of the betweenbrain, to provoke motor reactions, of which some have a considerable resemblance to certain hysterical symptoms (think of spastic torsion, for example) it seemed to the supporters of the organic theory that there was good reason to conceive the psychoneuroses as organic diencephaloses. The hypothesis of a psychogenic causation and evocation of the symptoms in question is therefore declared to be old-fashioned and unreasonable, and at all events quite superfluous.

But those who argue thus are quite forgetting that the cortical apparatus of perception is constantly reacting on the betweenbrain and is able to influence its functions in the most lasting fashion, and even, indeed, in certain circumstances, quite suddenly to modify them. That this is so is proved beyond a doubt by the following facts:

Firstly, by the physiology of the conditioned reflexes, which we shall presently consider more closely. For here we are confronted with the interesting phenomenon, that a purely cortical impression,

for example, an acoustic signal, can provoke the secretion of saliva in the dog; that is, can set a visceral-nervous process in motion. In order to obtain this result one has only to repeat the so-called "food note" several times simultaneously with the relevant stimulus which provokes the unconditioned diencephalic reaction of the secretion of saliva. For example, every time one shows the dog a sausage and then gives it to him to eat, a signal is sounded on a horn. From now onwards the "food note" alone, without the sausage, will provoke the prompt secretion of saliva. It may be objected, perhaps, that in the conditioned reflex we are dealing with a subcortical process, namely, a reflex from the optical midbrain centers to the diencephalic center of salivation. But this, after all, is a most improbable assumption. And in any case the objection cannot apply to the conditioned reflex. For here we are dealing with an associative phenomenon of memory, which, according to all that we know of such processes, can occur only in the cortex. As a matter of fact, Pavlov and his pupils have shown that after extirpation of the auditory region of the cortex all the conditioned reflexes of a visceral nature, which proceed from the cortical area in question, are permanently extinguished, and cannot be restored by any process of training. Since the physiology of the brain establishes the fact of powerful corticofugal influences of a functional character over the betweenbrain, one cannot see why similar processes in the betweenbrain, and also in the extrapyramidal paths, should not be instigated from the cortex even in the neuroses, and above all in hysteria.

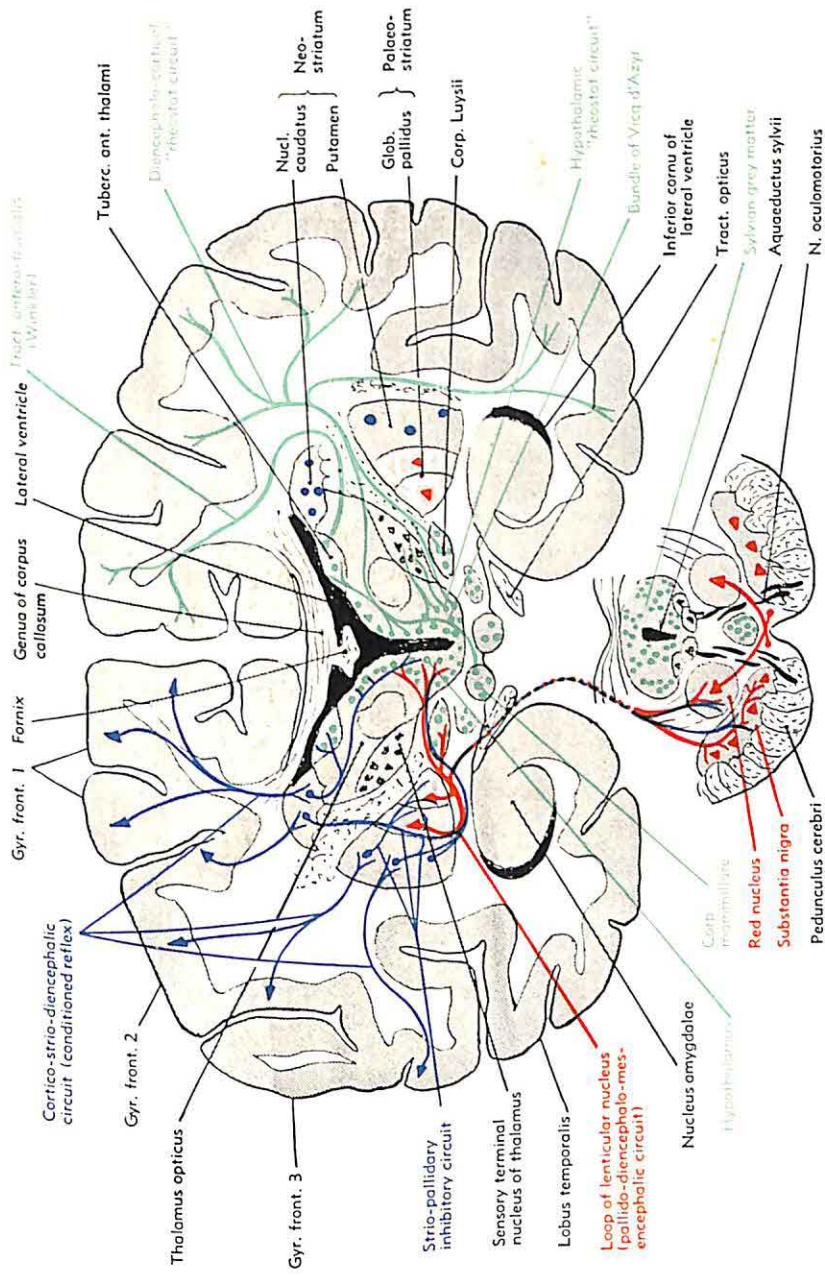
That this actually is the case is demonstrated, secondly, by the phenomenon of hypnotism, which has already been briefly mentioned. For here, beyond a doubt, we are dealing with effects of excitation, which have their primary point of issue in the cerebral cortex of the subject of the experiment. It is the verbal suggestions of the physician, which are perceived by the auditory sphere of the cortex of the subject, and thence—probably by way of the forebrain—reach the betweenbrain immediately and there provoke the modification of function referred to. (The same conclusion was reached by E. Frey.) At the same time, a precondition appears to be necessary, without which the state of hypnosis would not be produced; namely, the condition that through the hypnotic situation unconscious (repressed) mnemic affective excitations (emotional rec-

ollections of childhood) are simultaneously mobilized; that is, simultaneously released. But apart from this, it cannot be disputed that the hypnotic sleep as such, which is the basic condition of the deeper influence (literally deeper) of all further suggestions, depends on a direct action upon the diencephalic sleep center.

Thirdly, conversely, we see in hysteria the same betweenbrain symptoms as those which can be artificially evoked through hypnosis occurring spontaneously, and apparently in the same manner as the hypnotic phenomena, namely, through the shutting off (repression) of certain mnemonic excitations from the apparatus of perception. The close relations between hypnotism and hysteria may best be characterized by conceiving hypnotism as a sort of "artificial hysteria." The hysterical symptoms which are thus produced last as long as the barrage (repression) continues. The hysterical barrage, as you have heard, very probably depends on a partial functional isolation of the betweenbrain and the extrapyramidal motor centers from the influence of the perceptual apparatus. On the other hand, the spontaneously arising hysterical symptoms can be made to disappear through hypnosis and other psychotherapeutic methods—acting, once more, from the cerebral cortex; and in hypnosis they may disappear in a flash.

Fourthly and lastly, as we have said, it has recently been possible to obtain anatomical evidence of the corticofugal paths by means of which the cerebral cortex exerts its influence over the betweenbrain and the extrapyramidal motor apparatus. M. Minkowski and recently P. Glaes, by means of experimental extirpation of the cortex in apes, were able to demonstrate connections running from the forebrain and from the precentral region to the dorsal and ventral portion of the caput nuclei caudati, and the probable existence of cortical fibers running to the putamen neostriatum (Plate III). It is true that in the neostriatum these fibers are interrupted. But from its cells secondary paths proceed, which reach the palladium, the medial region of the thalamus, and also the hypothalamus.

Through these cortico-striate paths the influence of the cortex, especially of the forebrain, is brought to bear on the whole of the reflex apparatus of the extrapyramidal (pallido-mesencephalic) motor system and on the vegetative centers. In my opinion, therefore, even from the anatomic standpoint, there is no longer any pre-



Betweenbrain

Plate III

Scheme of the Centers and Paths of the Diencephalon

Green: The vegetative betweenbrain nuclei and paths. (Their influence on the basic output of the cortex might be conceived as a "rheostat circuit." Such a circuit is however rather hypothetical; in reality this influence may not directly operate on the cells of the cortex, but rather through the medium of a vascular effect.) *Blue:* The corticofugal paths to the strio-pallidum and to the diencephalon with the included inhibitory circuit of the strio-pallidum. *Red:* The motor paths from the pallidum to diencephalon and mesencephalon.

text for doubting the possibility of a purely psychogenic evocation of visceral-nervous and hysterical phenomena, or to describe them as improbable or even impossible.

It follows, from what has been said, that these reciprocal actions between the cerebrum and the betweenbrain are of the greatest importance, not only for a physiological explanation (i.e., an explanation referring to the technical aspect of the innervations of the occurrence of hysterical symptoms), but also for the explanation of the physiological *modus operandi* of psychotherapy. That is why we here—within the framework of the general theory of the neuroses—have to enter a little more thoroughly into the functions of the betweenbrain. And also for another reason: it seems to me that in the neurological discussions of the last few years as to the significance of the diencephalon and the extrapyramidal motor apparatus the facts just expounded, which point to the existence of a counter-influence of the cortex on the diencephalon, were often insufficiently realized. Only by the disregard of this important point of view can it be explained (or so it seems to me) how certain investigators could bring themselves to deny the existence of the psychoneuroses as functional disorders of the nervous system and refer the psychoneurotic symptoms to organic structural lesions of the betweenbrain, more especially when they appear after a head injury.

It was only recently that I came across the works of B. Disertori, in which this Italian savant (as the result of his research work on encephalitis lethargica), quite independently of me, had come to precisely similar conclusions, on all essential points, concerning the functions of the diencephalon and the reciprocal relations between this and the psyche. Like myself, Disertori is decidedly opposed to the purely mechanistic theories of the "organic" party, which deny the psychogenic origin of the hysterical syndrome, and seek to refer it to an organic diencephalosis. He also sharply emphasizes the difference between the psychogenic symptoms of hysteria and the symptoms of Parkinsonism, and gives the clinical criteria of the distinction between these two categories of nervous disorder. They are essentially those which I have already explained. At the same time, Disertori, like myself, refers the disposition to hysterical (psychogenic) "psychic cleavage" (as he puts it) to a somatic, congenital or acquired basis—namely, to a hyper-excitability of the hypothal-

amic formations, which according to him have above all a cortex-inhibiting function. He conceives that in hysteria the hypothalamic centers "are roused to increased activity by emotive-suggestive or even by conditioned excitations." Like myself, this author rejects an "anatomic psychology," and restores the psychology of the unconscious to its place as the only adequate explanation of symptom formation in the neuroses.

(3) *The Reflexological Theory of Neurosis (Theory of the Conditioned Reflexes)*

Of the greatest significance for the general theory of the neuroses are the results of the research undertaken by the eminent Russian psychologist Pavlov concerning the mechanism of the conditioned reflexes. It is true that Pavlov's theory, in its present comprehensive form, extends far beyond the special province of the neuroses, as it professes to present us with nothing more or less than complete representation of the functional operations of the cerebral cortex. But since more recently it has been applied by many investigators—above all by M. Walthard, and even by Pavlov himself—to the explanation of the phenomenon of neurosis, and since it has been claimed for it that on this basis the nature of neurosis can be completely elucidated, in the following lecture we must undertake an exhaustive examination of Pavlov's theories.

Pavlov began by investigating the innervation mechanism of the secretion of the salivary glands in the dog. He fastened a glass cannula in the duct through which the secretion of the salivary gland in the lower jaw of the dog (*Glandula submaxillaris*) was emitted, through which cannula, on the perception of definite stimuli, the saliva was discharged outside the mouth, so that its amount and composition could be ascertained. If Pavlov now poured a weak solution of hydrochloric acid into the dog's mouth, or dropped sand into it, or showed him a sausage, there was on each occasion an abundant discharge of saliva. This salivary reflex, which followed unconditionally every time these stimuli were applied, Pavlov called an unconditioned reflex, and the stimuli which could evoke these unconditioned reflexes he described as adequate stimuli, because the reflex paths and centers to which these stimuli are applied are evidently congenitally adapted to deal with them. Adequate stimuli are therefore those which activate an anatomically preformed inherited mechanism in the nervous system, or a "structural automatism," as I have described it.

Now Pavlov combined the adequate reflex-provoking stimulus with some other sensory stimulus which in itself was of no interest to the dog, and which, by itself, was quite incapable of evoking a flow of saliva. For example, every time he showed the dog a sausage he caused a note to be sounded on a horn in the

neighboring room. After a certain number of repetitions it was found that henceforth this originally quite indifferent acoustic stimulus was capable of evoking a profuse secretion of saliva, that is, there was now on every occasion a flow of saliva even if only the acoustic signal, the so-called "food note," was sounded, although the original affective stimulus—the appetizing object—was not within the animal's range of perception. In other words, as a result of simultaneousness, a firm associative relation was formed between the adequate affective stimulus and the originally indifferent, inadequate acoustic stimulus, with the result that henceforth the latter could always act vicariously for the former, that is, could provoke the same parasympathetic reflex. The unconditioned parasympathetic reflex of salivary secretion had thus, in respect of this one sensory stimulus, and only in this one dog, which had been specially trained to receive it, become a conditioned reflex, in so far as the reflex could now be evoked no longer exclusively by the adequate stimulus of food, but also by another, originally inadequate sensory stimulus—under the condition that this inadequate stimulus was the one which had once operated simultaneously with the unconditioned affective stimulus. Further, it proved that practically all the reflexes of the visceral nervous system can be trained in this way to become conditioned reflexes; that is, can enter into a secondary associative relation with any other sensory stimulus (not only acoustic, but also optical, olfactory and tactile, etc.). In all these cases, then, we have the same result: the sensory stimuli whose action on the visceral nervous system of the animal thus trained was originally quite incapable of provoking the secretion of saliva henceforth operate exactly as though they were affective stimuli, i.e. as though the affect which was originally evoked only by the adequate instinctual stimulus is now partly transferred to or displaced upon the originally indifferent and incidental concomitant stimuli or concomitant circumstances. These conditioned stimuli have become, as it were, symbols, which can henceforth represent in the animal's sensorium the original adequate stimulus-complex (the primary *Gestalt* stimuli, in the terminology of Gestalt psychology—M. Wertheimer). It is fundamentally the same process when the name of a thing immediately evokes in us ideas of the qualities of this thing, and the associated affects.

Pavlov's discovery, that originally indifferent, inadequate stimuli, because they have once occurred simultaneously with primary, unconditioned affective stimuli, can produce the same effects as the latter, was, as a matter of fact, not new. This state of affairs is only a special instance of a general law which an eminent zoologist, Richard Semon, had described as the "law of engraphy" in his important (but since then, unhappily, forgotten) work on *Die Mneme*. Semon had already defined this law by stating that all simultaneous operating stimuli inevitably combine to form a common, unique engram-complex (en-gram = impression), and he expanded this rule by appending a second rule, namely the "law of ecphoria," which states that any one of the sensory impressions which go to make up such an engram-complex is capable, on its repetition, of provoking the whole engram-complex to ecphoria—that is, of releasing or arousing it. Here we have not merely a theory of recollection (although, of course, all the phenomena of memory are subject to Semon's laws); it is rather the case that Semon's theory is universally valid for all "organic phenomena of reproduction"; that is, wherever the phenomena of repetition occur in living tissue. For example, even in the development of the individual (ontogenesis),

which is only an abridged repetition of the evolution of the race (phylogenesis), and also in the phenomena of regeneration.

But let us return to Pavlov's theory. It presently appeared that the evocation of a conditioned reflex by the representative, symbolical stimulus (at least in the dog) cannot be repeated an unlimited number of times, but that the effect of the conditioned stimulus gradually becomes weaker unless it is from time to time "confirmed" by the inclusion of the unconditioned primary stimulus. From time to time, simultaneously with the sounding of the "food note," one must show the sausage to the dog, and afterwards give it to him to eat, otherwise the "food note" will gradually lose its power of evoking a flow of saliva—in other words, the conditioned reflex fades out.

Further, it appeared that by the system of training described one cannot only evoke positive conditioned reflexes of any desired number and quality, but that in the same manner negative conditioned reflexes, that is, conditioned inhibitions of the natural visceral nervous functions can be produced. For example, now and again, simultaneously with the "food note," which hitherto was followed by the feeding of the dog, a certain light signal is shown, and now, whenever these two disparate stimuli are administered together, no food is produced. Or the food is produced only when the "food note" has reached a certain pitch, but not if it is a third or even one tone deeper.¹ It thus seems as though the accompanying optical stimulus or the slightly deeper note acted like a prohibition; at all events, not only the salivary reflex but all the rest of the affective motor apparatus of the animal is inhibited by the "conditioned inhibitive reflex" (the so-called internal inhibition of Pavlov). Yet the inhibitions thus produced are extraordinarily labile; they can very easily be upset by any sort of disturbing stimulus (especially acoustic), so that now an "inhibition of the inhibition," or a "disinhibition" enters into operation.

Under some circumstances an unforeseen catastrophe may suddenly occur, apparently provoked by collisions between conditioned excitation and inhibition processes in the cerebral cortex of the animal (Ivanov-Smolensky). If the differentiation between the stimulus which is supposed to evoke the positive, and the stimulus which is supposed to evoke the negative conditioned reflex has, for example, been minimized to the extent of choosing, for the positive stimulus, a perfect circle of light, and for the negative inhibitory stimulus a broad ellipse with diameters of eight and nine, the animal's nervous system breaks down, and all previously formed conditioned reflexes are overthrown, either in the direction of excitation or in that of inhibition. In the first case Ivanov-Smolensky speaks of a "breakdown of the nervous system with predominance of the excitation processes." The animal falls into a state of general excitement which is entirely analogous to the "dynamic storm" (Kretschmer) of human pathology; he gnashes his teeth, barks, howls, tries to break his leash, etc. Or in other cases the collision produces a more or less complete inhibition of the whole of the motor apparatus; the animal no longer reacts to a call, and with drooping ears, indrawn tail, and bristling coat, stands motionless in a corner; in short, he is the picture of an extreme state of depression (failure of the nervous system in the direction of

¹ It will be readily understood that by this method it is possible to test the delicacy of the animal's senses—that is, their power of distinguishing the smallest differences of pitch, and other variations of stimulus. (Kalischer and other of Pavlov's collaborators.)

inhibition). In both cases all the positive and negative (inhibitory) conditioned reflexes are abolished, and it will take a rest cure of several months before one can do anything with such an animal again. Pavlov is inclined to conceive these conditions, which are apparently active and passive defensive reactions (and remind one of the "death-shamming" reflex of the lower animals) as analogous to the human neuroses.

And now we come to the application of the results of Pavlov's researches to the theory of the neuroses. They have undoubtedly yielded a number of new and valuable standpoints (cf. in particular M. Walthard), but in my opinion there can be no question, so far, of founding a general theory of the neuroses on the basis of the conditioned reflexes and inhibitory reflexes alone.

1. To begin with, the vegetative symptoms of the psychoneuroses, especially in hysteria, but also in many phobias, which were hitherto peculiarly enigmatic, have suddenly become much more intelligible. After all, Pavlov had demonstrated that vegetative reflexes—for example, the reflex of the salivary secretion—as the result of simultaneous encounter with elements of psychic apperception, could at any time become secondary to conditioned psycho-reflexes, inasmuch as the vegetative excitation process or the accompanying affect in the cerebral cortex of the animal might become associated in a simultaneous engram complex, in accordance with Semon's law, with the exteroceptive perception process of any chance concomitant stimulus. In view of this, Pavlov's conditioned reflexes are often called associative reflexes, or association reflexes. It is clear that through this process the influence of the cerebral cortex is enormously enlarged, since in the course of life it may extend itself more and more to nearly all the subcortical innervation processes, which were originally entirely withdrawn from its direct influence. Thus, blushing as an unconditioned reflex of sexual shame, which was originally provoked only by direct sexual aggression, came to occur, in the course of time, in response to a mere verbal allusion, a corresponding gesture, or even the mere thought of a sexual process, since this allusion, gesture, etc. had acquired the value of symbols for the primary process and could now at any time represent it vicariously. Or, if on the occasion of a direct sexual aggression the defensive or closing reflex of the vagina has come violently into play through the innervation of the constrictor muscles ("*custodes virginitalis*"), this reflex may occur, in the form of a troublesome vaginal cramp,

if any subordinate concomitant circumstance of the original situation should be repeated (Walthard). It is the same with all the rest of the vegetative reflexes; their chance coincidence with originally subordinate accompanying circumstances, situations, etc. may be enough to ensure their prompt appearance as conditioned reflexes at every recurrence of this situation, this accompanying circumstance. But even automatic processes in the cerebrospinal ("animal") nervous system can be changed into conditioned reflexes by their combination with affect-laden perceptual elements; that is, at every recurrence of the perception, which henceforth acts as a signal, they can be evoked as conditioned reflexes. Pavlov has therefore defined the function of the cerebral cortex as the faculty of forming conditioned reflexes throughout life, in unlimited numbers. It becomes understandable why Bechterev and others finally came to the conclusion that the activity of the human psyche is based solely on conditioned reflexes, and why they spoke, in this sense, of a "human reflexology."

And yet, in the case of the neuroses, the case is really by no means so simple. For in the first place, as you have just heard, the conditioned reflexes in the animal—at least, those artificially produced in the laboratory—as a general thing, have only a very ephemeral character. They fade out gradually unless they are "confirmed" again from time to time by the unconditioned reflex. The dog who constantly hears the food-note without ever seeing the sausage and being given it to eat soon becomes indifferent to the note and no longer reacts to it by a secretion of saliva. And the conditioned inhibition reflexes which can be artificially produced in the animal are even more labile. But in the neurotic matters are very different; indeed, they are just the other way about. In the neurotic the conditioned inhibition reflexes appear to increase constantly in strength when the unconditioned reflex procedure—that in the direct satisfaction of the instinct—occurs more rarely. Indeed, one has the impression that it is precisely the absence of satisfaction which is the pathogenic factor, inasmuch as it continues to increase the symbolic value of the accessory stimuli which used to accompany the unconditioned reflex. But even the neurotic inhibition of the primary instinctive processes cannot be unreservedly compared with a conditioned inhibition reflex, such as one can obtain, in the laboratory,

in the animal; for in the animal, provided it has not suffered a "breakdown of the nervous system" as the result of excessive complication in the arrangement of the experiment, the positive conditioned reflex can be evoked again at any time without prejudice to the formation of conditioned inhibitory reflexes; one has only to repeat the specific symbol. In the first place, the unconditioned reflex, the primary instinctual excitation, the so-called "primary process," can of course be evoked again at any time by producing the adequate stimulus; for example, the sausage. On the other hand, we find in the case of the neurotic inhibition that it has an absolute effect; that is, once it is established the original primary instinctive process can no longer be evoked—no matter how tempting the adequate stimulus. For example, a neurotically frigid wife is always frigid—even if she is really in love; a psychically impotent man proves to be always and everywhere impotent, even when the inhibitory prohibition has long ago been annulled and is now meaningless (for example, even in marriage, though by entering it the man acquires a State and even an ecclesiastical permit for sexual intercourse). The inhibition, which originated in prohibitions and threats of serious punishment during childhood, and which the patient has gradually imposed upon himself and appropriated, remains effective even when the prohibiting authority has long ceased to have any power over him, and when the actual situation has long been fundamentally transformed.

But in the compulsive process of the formation of conditioned inhibition reflexes (a process, of course, which is constantly occurring, even in human beings) something else is apparently required if they are to have a pathogenic character. This something is the neurotic conflict. Here it might be objected that even the artificial neuroses which Pavlov could produce in his laboratory animals result from a conflict, namely, the conflict between conditioned excitation and inhibition processes, which then leads to a "breakdown of the nervous system" in the direction of either excitation or inhibition. But these experimental neuroses in the animal comprise only a very small proportion of the symptoms to be observed in the various forms of the human psychoneuroses—for example, in certain forms of hysterical crises of emotion and depressive states of inhibition; all the other syndromes of hysteria, phobia, and obsessional

neurosis cannot possibly be referred to so simple a scheme. They can be understood and explained only as the result of a compromise between the excitation processes and the inhibition. While in the so-called "nervous breakdown" both processes—the conditioned positive and the conditioned negative reflexes—are simply annulled, and replaced by a general irradiation process in the whole cortex, in the sense of a state of excitation or depression, in the psychoneuroses we see, as a rule, both processes: namely, the primary process (the tendency to immediate satisfaction of the inhibited instinct) as well as the secondary process of inhibition condensed in the symptom to a coherent compromise solution. And this compromise solution—the psychoneurotic symptom—is consequently no longer a simple primary process, but a construct in which the primary process (the instinct), on the one hand, through the effect of the conflict between excitation and inhibition, and on the other hand through repression of the content of consciousness corresponding to the excitation processes, is distorted past all recognition.

2. On the other hand, there is no doubt that the periodical emergence of the psychoneurotic symptom as a whole, i.e., as a complete structure, occurs in accordance with the mechanism of the conditioned reflex. For you heard, just now, that in the erythrophobe, for example—that is, in a person suffering from a morbid dread of blushing—a mere allusion, which in most cases has a symbolical value only for the patient himself, not for those about him, will provoke the morbid flush. It is doubtless the same with all the rest of the psychoneurotic symptoms which are given to appearing periodically, and above all with hysterical attacks: They are all provoked by the recurrence of certain situations. Sometimes this may be only the utterance of the apparently inoffensive word which possesses for the patient, and for him only, a specific meaning, so that he reacts to it as the actor reacts to his cue.

In other words, the theory of the conditioned reflexes offers a complete explanation of the periodical appearance of so many psychoneurotic symptoms, yet obviously the symptom itself cannot without further consideration be referred to the operation of a simple conditioned reflex such as Pavlov and his pupils provoked in his laboratory in dogs and apes.

3. Accordingly, the theory of the conditioned reflexes, greatly

though it has contributed to our understanding of certain processes in the neuroses, is incapable of solving the riddle of the neuroses as a whole. Here again, as in the rest of the attempts at explanation on purely physiological or organic grounds, we realize, after closer investigation, that the physiological theory can really explain only the innervation processes which play a part in the origin and emergence of the neurotic symptoms. That is, it gives us a technical explanation of the innervation processes, but not the causal-genetic explanation of the processes in question as a whole. Yet it endeavors to understand these complicated psychological processes, not according to their structure only, but according to their genesis in the past of the individual; it is a "physiological psychology," and as such is the only one of the organic theories of neurosis which takes account of the dynamic relations, the interaction of forces which are operative in the neurotic processes. After all, it works with such physiological conceptions as "excitation," "inhibition," "conflict" between excitation and inhibition processes—and even, in its most recent shape, with the idea of repression (see the monumental posthumous work by Max Walthard on the *Relations of the Nervous System to the Normal and Pathological Activities in the Female Genitals*, which to my knowledge is the best, clearest, and completest presentation of the theory of the neuroses on the basis of Pavlov's theory of the conditioned reflexes). One may say then that Pavlov's theory represents the first attempt to conceive these dynamic processes in the neurotic manifestations from a physiological standpoint, and to give a sufficient technical explanation of their innervation.

In the last few lectures we have thoroughly discussed the various organic theories and attempted explanations of the neuroses. If you think over what you have heard once more from the standpoint of mental hygiene (which we must not overlook!) you yourselves will be able to deduce the following rule:

The conscientious physician should never proceed in practice on the lines of a merely theoretical preconception: that is, he must never allow his prophylactic and therapeutic measures to be prescribed exclusively by some theory which he has adopted. Here, remember, we are no longer dealing with the problem of the differential diagnosis between organic and functional disorders, which,

of course, has to be made at the outset, before a case can be treated therapeutically. For example, it must be ascertained beyond a doubt whether the stomach pains of which a patient complains are or are not due to an anatomic alteration of the stomach: for example, a gastric ulcer or even a cancer. Having excluded such a pathological, anatomic alteration as the cause of the troubles, and having established the fact that these troubles are consequently of a functional nature, there are still, theoretically, many possible explanations of the nature and origin of these functional disorders. This may be a case of neurasthenic stomach troubles, or it may be due to a so-called "organic" neurosis, a hysterical manifestation. Now, if the physician is a sworn supporter of one of the organic theories of hysteria—if, for example, he is a disciple of Babinski's theory that such vegetative disorders of a functional nature cannot be psychogenic, but must be based on functional organic processes in the vegetative nervous system (on which, of course, the conscious will have no influence whatever), he will be only too readily inclined to treat the case by purely medical means, and will fail to approach it from the psychological aspect. If he himself is no psychologist, it will not occur to him to refer the patient for further treatment, or at least for psychiatric diagnosis, to a skilful psychotherapist. The result will possibly be that the case will drag on for years, gradually becoming incurable, while psychotherapy might have brought prompt relief. Even in the practical treatment of accident neuroses such an attitude on the part of the physician may have disastrous consequences; for example, a physician who on principle adheres to the opinion that the after-results of a fracture of the skull can only be of an organic and cerebral nature, will go on treating such a case endlessly, instead of recommending the patient to reach a settlement of the question of compensation as quickly as possible. Thus, in the course of time, a so-called "medical neurosis" will develop, which later on will be refractory to any sort of treatment.

But the very converse may and of course does happen: A psychotherapist, after receiving a report of the case from the hospital physician, since the preliminary examination resulted in a diagnosis of purely functional disturbances, may burden himself with such a patient for months or even years, simply because of his conviction that all functional disorders *eo ipso* are psychogenic. He will there-

fore obstinately neglect to order the patient medical as well as psychotherapeutic treatment—such medicines for example, as might reduce the tonus of the sympathetic. In other words, he will see only the psychogenic superstructure, the secondary psychoneurosis, persistently ignoring the actual-neurotic substructure. I hold that the conscientious physician should put the welfare of his patient before all theoretical judgments and beliefs. *Salus aegroti prima lex!* No matter how convinced one may be that the symptoms of the grande hystérie in Charcot's sense of the term are based on organic changes in the extrapyramidal system, one should be sufficiently unprejudiced, if pharmaceutic preparations are ineffective, to see, for once, what pure psychotherapy can do; or, if one does not understand this method of treatment, one should send the patient to a professional psychotherapist, instead of trying new medicines in a spirit of doctrinaire rigidity. In any event, the choice of the most suitable physician is an integral component of psychical hygiene.

Eighth Lecture

B. HEREDITY

Ladies and Gentlemen:

In the last few lectures we have given due attention to the various "organic" theories of neurosis, and we have subjected the organic factors which might play a part in the symptomatology and etiology of these functional nervous disorders to a critical examination. In the end we came to the conclusion that in the "actual neuroses" at least the primary symptoms—but only these!—are based on a functional disorder—in most cases of toxic origin—in the endocrine-vegetative system. On the other hand, after a careful and critical survey of all the known facts we were led to the conviction that for the genuine psychoneuroses in the narrower sense of the term so simple a mechanism cannot be held responsible either for the etiology or for the symptom formation; that here both the endocrine-vegetative and the various neuropathological attempts at explanation fail. They can at most provide a technical explanation of the innervatory processes in the formation and release of symptoms; that is, they can point to the anatomic paths on which the pathological reactions we find in the psychoneuroses may occur, and to the physiological mechanisms by which they may be produced. On the other hand, no one would claim that these mechanisms could afford a satisfying explanation of the genesis of the psychoneurotic phenomena in their totality. We know, indeed, that here, in hysteria, in the phobias, and in obsessional neurosis, between the primary pathogenic factors and the symptoms a number of highly complex psychobiological mechanisms intervene—dynamic factors whose influence dates back to very early childhood, and indeed even to the onto- and phylogenetic prehistory of the individual. Today, in fact, after more than a century of research into the neuroses, it is established beyond a doubt that the psychoneuroses are in essence primary disorders of the emotional life which always, without exception, spring from the

soil of psychic conflicts of the instinctual life. Or, to put it briefly: The psychoneuroses are the outcome of affective disorders—i.e., abnormal emotional reactions based on conflicts in the instinctual life. We owe the recognition of this etiology (though it had already been suspected) mainly to the genius of Freud, who helped to establish it as a scientific fact, and who discovered and systematically elucidated the relations of the various factors at work.

If we now venture to look more closely into these relations we must realize clearly at the outset that so complex a formation as a psychoneurosis cannot be the effect of a single "cause," or be "explained" by a single cause; but that it is rather the end-product of a whole chain of circumstances, a series of conditions, all of which must be fulfilled before what we call, in individual cases, "hysteria" or "phobia" or "obsessional neurosis" makes its appearance. We must also do what has already been done in all other departments of scientific research: we must replace the old theory of "causes" by a theory of determinants. And we are justified in anticipating that we shall be a great deal nearer to understanding the nature of these neuroses if we are in a position to indicate, first of all, in a general way, the multiple conditions which may lead to the emergence of the psychoneuroses, and then to elucidate the role, or the special part, which each of these factors plays in the formation of symptoms. To this end, the ensuing description will follow the way which the neuroses themselves have followed in their formation: namely, the path of history and evolution, the path of phylo- and ontogenesis.

As the last causative factor, to which we come if we follow backwards the chain of cause and effect, heredity is usually inculcated. It is asserted that as the first factor in the formation of neurosis we must assume an inherited disposition to those abnormal reactions of the emotional or instinctual life which in the end lead to neurosis. At least, this holds good for the extremely serious forms of the so-called constitutional hysteria and obsessional neurosis, which in this respect reveal analogies with the so-called endogenous psychoses, like schizophrenia and manic-depressive insanity. The genuine psychoses, however, are not included in this investigation, although the severe hysterias and the severe obsessional neuroses reveal many points of relation to the psychoses just named, and even transitional forms.

A knowledge of the biological basis of the doctrine of heredity

must be taken for granted here, as an exhaustive exposition of the doctrine would exceed the scope of this book. Those who seek for guidance in this department of knowledge are recommended to turn to the admirable and concise treatise by R. Goldschmidt. On the other hand, attention must be directed to the great difficulties of transferring the results of biological research obtained by experimenting with plants and animals to the extraordinarily complicated circumstances of human pathology (and especially of psychopathology). One cause of these difficulties is the fact that we cannot experiment with human beings as we can with plants and animals; in civilized countries (apart, perhaps, from endogamous areas in remote mountain valleys, which offer excellent opportunities for research into the problems of pathological inheritance) anyone, generally speaking, is free to marry whom he will. The mass inheritance of the descendants of such mixed marriages will therefore show, after a few generations, such a mixture of homozygotic and heterozygotic, dominant, and recessive features as defies analysis, and, in comparison with the subjects of experimental research, is distinguished by an inconceivable complexity. Secondly, human beings are constantly losing sight of their ancestors, which often makes it difficult, if not impossible, to determine whether a particular feature is a so-called "Mendelian characteristic." And thirdly, diseases, as phenotypic "features," only occasionally represent the operation of a specific, genetically fixed predisposition. (This holds good, for example, of "Thomsen's disease," hemophilia, hereditary ataxia, etc.) In most cases—and especially in the neuroses—the so-called "hereditary predisposition" is restricted to general states of the constitution; for example, of the endocrine, neurovegetative, instinctual constitution, certain functional susceptibilities of the extrapyramidal motor apparatus, etc.—constitutional tendencies, in consequence of which, according to the environmental influences prevailing in the individual life of the bearer, quite different phenotypic reactions and modes of behavior may arise; in one person a hysteria, in another an obsessional neurosis or a phobia, while a third may remain practically healthy and normal, although he too must be assumed to have inherited the same constitutional tendency as a Mendelian dominant. Having regard to these complex conditions of constitutional and environmental influences we may arrive at a dynamic mode of view-

ing the "field of forces" of the gene, such as L. Szondi has expounded in his interesting book, *Schicksalsanalyse*.

In nervous disorders—and also in the neuroses—we must distinguish mainly between similar (homologous) and dissimilar (heterologous) inheritance.

Similar (i.e. phenotypically homologous) heredity is present when a child born of a hysterical mother subsequently develops hysteria; dissimilar (phenotypically heterologous) heredity is present if, say, the children of alcoholic, lunatic, or epileptic parents develop a nervous disease of a different kind, such as an obsessional neurosis or a severe constitutional hysteria, neurasthenia, or phobia.

Only in the first case can a direct and dominant inheritance of a predisposition to hysteria, neurasthenia, etc. be assumed in the sense of a genetic fixation of the predisposition in question in the chromosomes of the strain; yet even here this need not absolutely be the case. In the second instance, on the other hand—in the heterologous "inheritance"—there can only be, at most, a genetic correlation of a general predisposition to psychopathy and neuropathy, which may manifest itself in quite different ways according to the combination of the genes responsible, evoking now this and now that clinical picture. The genetic predisposition to be assumed must here comprise many more general pathological disorders than present themselves in the phenotypically different forms of disease.

As regards constitutional neurasthenia, you were told in an earlier lecture that for this a congenital predisposition must indeed be assumed, which one can conceive as consisting of a congenital, morbidly enhanced lability of the endocrine apparatus and the neuro-vegetative centers, combined with a primary insufficiency of the hemo-encephalic barrier. Similar constitutional foundations should perhaps be postulated for the enhanced predisposition to contract serious anxiety neuroses which many people display. The factors named constitute the nucleus of the so-called "neuropathic constitution," so often mentioned in the older literature of the neuroses. Ziehen claims to have found such a neuropathic constitution in 40 per cent of his cases of similar inheritance. According to Oppenheim a toxicopathic stigma, due to the alcoholism of the progenitor—but also to morphinism and other toxicomanias—lays the foundation for neurasthenia in the offspring. In such cases, however, we have not a

genuine inheritance in the sense of a permanent alteration of the genes, but merely a so-called aftereffect or consequence in the sense of the theory of heredity.

On the other hand, E. Hanhart, by comprehensive investigations into family histories and individual constitutions (including those of a few monozygotic twins) was able to show that an inherited, genetically unitary, vegetative "partial constitution" underlies the phenotypically different constitutional allergies (idiosyncrasies) such as hay fever and "hay asthma," allergic eczema, the foodstuff allergies, serum disease, migraine, Menière's vertigo, etc., a partial constitution which is probably a Mendelian dominant. But this is by no means identical with the neurasthenic constitution.

Alcoholism is constantly being blamed as the causative factor in the inheritance of a predisposition to develop a psychoneurosis, in the sense that it creates an indirectly hereditary stigma. It is a fact that one observes that the children of alcoholics do with remarkable frequency suffer, in later life, not only from neuropathies (neurasthenias), but also from psychoneuroses, and the case histories of the clinics and polyclinics include, in an alarmingly large number of cases of severe neurosis, the laconic note: "The father was a drinker." In a certain proportion of such cases there may actually be the special consequence of the alcoholic poisoning of the parental germ cells which Forel has called blastophthoria; but Meggendorfer has justly remarked that Forel disregarded the fact, or at all events did not sufficiently allow for it, that alcoholics themselves usually suffer from an inherited taint, and moreover, that with conspicuous frequency their wives suffer from congenital defects. In any case, according to Meggendorfer, the statements formerly made relating to "Saturday night children" were grossly exaggerated. The possibility of a reappearance of a pathological or defective inheritable disposition in consequence of alcoholism is granted, but such reappearance is not yet established with certainty. According to C. Brugger the children of alcoholics do not exhibit psychic aberrations more frequently than those of their nephews and nieces who are the children of non-alcoholic parents, and in the parents themselves the aftereffects of alcoholism have as a rule very largely disappeared. On the other hand, according to Brugger the children of alcoholics are themselves especially liable to alcoholism (Rybakov, Rieg). Today, however, the

majority of those engaged in the investigation of the problems of heredity incline to the view that alcoholism is itself only a symptom of a pre-existing psychopathy or mental affection. As long as thirty years ago certain Swiss psychiatrists—Kielholz, Diem, and Graeter—and W. Stöcker, among German authors, had come to this conclusion. Heilig found that in more than 25 per cent of the alcoholics treated in the psychiatric clinics of Strassburg their alcoholism had developed from a definitely psychotic or psychopathic basis. M. Boss found symptoms of mental disorder in 25 per cent of the male and 36 per cent of the female alcoholics included in his statistics. We know that congenital feeble-mindedness is often at the root of alcoholism. Further, many alcoholics exhibit epileptoid features (irritability, brutality, mental lethargy, lack of judgment); and conversely, we fairly often find drinkers among the relatives of epileptics, a fact which has led to the erroneous assumption that epilepsy originates in lesions of the germ cell due to the alcoholism of the father (Megendorfer). Slightly psychopathic characteristics are very frequently observed in drinkers. According to Bonhoeffer 70 per cent, and according to Pohlisch 75 per cent of all alcoholics are psychopaths, and 10 per cent are epileptics, or depressives, or imbeciles.

To sum up: From the fact that the children of alcoholics are particularly liable to develop a psychoneurosis we need not necessarily deduce the existence of a blastophthoric lesion of the germ cell, nor yet a positive influencing of the germ plasm by the father's alcoholism—in the sense of a direct inheritance. Here, undoubtedly, the serious and continually repeated psychic traumata to which the children of alcoholics are especially liable play a much more essential role: they are constantly compelled to witness the deplorable scenes resulting from the father's intoxication, to say nothing of the incestuous attacks which they so frequently have to suffer. In short, the unspeakable miseries of childhood in the families of drunkards may contribute far more than lesions of the germ cell to the development of the acquired predisposition to a subsequent psychoneurosis. To such factors must be added many other environmental influences of a specific character, such as the influence of constant instigations to drink—proceeding either from the father himself, or from the drinking customs obtaining in certain circles: or, to put it more plainly, bad habits, the development of a crushing sense of social inferiority,

due to the depressing consciousness of coming from such an environment, etc.

Many writers have done their utmost to establish a connection between constitutional neuropathy and the "great" psychoneuroses and psychopathies. Thus, according to K. Schneider there is a very close connection between the somatopathic and the psychopathic constitution. E. Braun, too, attributes the "nervous constitution" or "neuropathy" (under which heading many modern authors include the neurasthenic syndromes) to the co-operation of a somatic defect of regulation in the vegetative system with a psychic disharmony. Further, Enke, Castellino and Scala claim to have established the conspicuous frequency of certain endocrine-vegetative types among the sufferers from "accident neurosis." Mazzeo and Giani insist on the importance of the endocrine constitution, and its regional differences, in cases of war neurosis and accident neurosis, while Ruth Meier-Blauw and Hanse have endeavored to incorporate the different forms of accident neurosis in Kretschmer's well-known constitutional types. These authors agree, for example, in stating that pycnic patients suffer comparatively seldom from "compensation neurosis," and that if such a patient does fall a victim to this neurosis the compulsive ideas are corrected more easily than in asthenics and dysplastics, who according to Hanse provide the greater number of the "compensation neurotics." Jahn claims to have noted conspicuous vegetative stigmata and manifold metabolic disorders in cases of marked psychasthenic psychopathia. This is credible, for in these cases one is evidently dealing with neurasthenic psychopaths. In other cases, the psychopaths (among whom many modern psychiatrists would number also the victims of hysteria and obsessional neurosis), such authors as K. Beringer, H. Denning, and K. Fischer could detect no special vegetative stigmata, such as could be somatically correlated with the psychopathic singularities; in respect of their vegetative functions, which were even pharmacologically tested, the patients were not distinguishable from psychically normal persons. Maria Gebbing, examining 10 families of neurotics, consisting of 466 persons, arrived at the same conclusion. In these families, of course, there was a considerably greater number of cases of psychoses, psychopathies, neuroses, debility, organic nervous disorders, infantile

convulsions and enuresis; on the other hand, it was impossible to establish a relation between vegetative lability and neurosis.

As regards the hereditary pathology of the individual psychoneuroses, Briquet, as was mentioned in the second lecture, placed heredity high on the list of the causes of hysteria. Indeed, he claimed that he had established the fact of direct inheritance in nearly two-thirds of all his cases. He did not hesitate, therefore, on the basis of his statistics, to assert that the offspring of parents of whom one or both were hysterical were twelve times more liable to hysteria than the children of non-hysterical parents. Charcot, too, and his pupils Gilles de la Tourette and Pitres, used to attribute to heredity—and especially to similar heredity—the first place among the possible causes of hysteria. According to Charcot hysteria is among the inherited, “family” affections of the central nervous system, so that physical and psychic traumata should be accounted only as *agents provocateurs* or incidental and evocative causes.

The opinion of the older French school of neurologists—that hysteria is an inherited, “family” nervous affection—was gradually adopted by science, and to this day it is practically accepted by even the modern representatives of neurology and psychiatry. We have already mentioned Löwenstein’s records, based on his pupillometrical researches, which show that the so-called hysterical constitution corresponds with definite peculiarities of reflex excitability. According to Kraulis the inherited constitution is of decisive importance in at least the extreme degrees of hysterical promptitude of reaction. Among the children of the same parents, under treatment for hysterical reaction, he found the probability of a hysterical reaction forty-five times greater than among the ordinary population; while the number of schizophrenics and manic-depressives was about the normal figure. Liability to hysterical reaction, in Kraulis’s opinion, is manifestly not on the borderline of the endogenous psychoses. Kleist, Persch and Panse came to the same conclusion. As against this, the proportion of epileptics was five times as great as among the ordinary population. On the other hand, Luxenburger found eight times more than the average proportion of hysterical persons in the families of epileptics, which points to a certain relation between the liability to epileptic and hysterical reactions. But here one must reflect how often the lay observer confuses an attack of hysteria with an epileptic

fit. Mauz also found a certain relationship between hysteria and epilepsy; he speaks, indeed, of an "ictafine constitution," which would include all sorts of sudden attacks, whether organic or psychogenic; and elsewhere he speaks of a "reflectory constitution," under which the majority of the asthenic types are comprised. According to Panse similar relations exist between Meggendorfer's group of affective epileptics and the craving for adventure, the tendency to untruthfulness, and exaggeration. On the other hand, Panse was unable to establish any relation between hysteria and the endogenous psychoses. In the family tree of a patient who presented an extreme case of pseudologous psychopathy he found, among the blood relations, instability of character, hysterical reactions, morphinism and alcoholism, reactive suicide, but no endogenous psychoses. The parents of the person under examination were closely related. The same conclusion was established by M. Lutz in the case which he described of a woman suffering from pseudologia phantastica. According to Panse, persons greedy for recognition and pseudologous psychopaths constitute the majority of sufferers from hysterical reaction, as precisely these types, on account of the peculiarity of their psychic structure, are liable to readily provoked and intensive hysterical reactions. In the second rank follow persons of weak will and somatic insufficiency; then come the intellectually deficient and infirm.

According to Kraulis's statistics, only in 9.43 per cent of cases were the parents of hysterical persons themselves hysterical. On the other hand, among the offspring of hysterical parents nearly 15 per cent had hysterical attacks, while nearly 27.6 per cent were "excitable and nervous." The tendency to prompt hysterical reaction, according to Kraulis, is found more especially in asthenics (and here Mauz is in agreement). 15.1 per cent of the parents of his hysterical subjects were socially abnormal psychopaths. Kraulis, on the basis of his findings, assumes, in a great number of cases, a similarly inherited predisposition to such hysterical modes of reaction as occur more especially in unstable, recognition-seeking and asthenic personalities.

Just as he admits no relation between hysteria and the hereditary province of the endogenous psychoses, neither will Panse agree that there is a special affinity to any of Kretschmer's types of physique: to neither the leptosome, nor the pycnic, nor the asthenic (but in

respect of this last type Kraulis and Mauz disagree). Despite these contradictory findings, Rüdin believes that we should accept the possibility of a consistent and independent hereditary group of "hysterical psychopaths." Kretschmer himself described the peculiarities of the group of hysterics as follows: marked vegetative stigmatization; agglomerated disorders in the sexual constitution, and (with reference to the evocation of the cruder hysterical symptoms) "lability and impressionability of the reflectory and semi-reflectory apparatus"; that is, qualities which would more or less correspond with Mauz's "reflectory constitution." Von Weizsäcker designates the somatic region in which the hysterical tend to express themselves the "zone of co-ordination and conflict" of the voluntary and involuntary motorium of the striped and smooth musculature, the cerebrospinal and autonomous-sympathetic innervation. Cerebrologically he refers to a lability and an enhanced responsiveness of the functions of the ganglia of the stem and the midbrain, in the sense of the "vegetative ego" of Kleist.

This is approximately all that modern research into heredity can tell us of the inheritance of the hysterical predisposition. As you see, it is little enough; above all, the scanty genealogies and incomplete statistics are far from elucidating the significance of the various other nervous affections in the ascendants in respect of the hysterical predisposition. It must be emphasized that we do not as yet possess accurate family trees for the psychoneuroses, such as we have, for example, for certain "heredofamiliar" affections of the central nervous system—for example, for Friedreich's disease and Thomsen's disease. And as regards the direct inheritance of hysteria, we are as far as ever from any clear understanding of the nature and method of the presumed inheritance. On a critical survey of the material so far at our disposal one cannot avoid the impression that most authors distinguish too little, or do not distinguish at all, between actual inheritance and an acquired predisposition. Very many so-called hysterical characteristics which have unthinkingly been attributed to heredity may on closer examination prove to depend on quite different factors—that is, on factors which first came into play during the life of the individual. It is obvious that children who have grown up from their earliest years in a neurotic environment, perhaps under the care of a hysterical mother or nurse, are bound to acquire

an individual predisposition to neurosis in consequence of the defects of training and education which are quite inevitable in such a neurotic environment. They will also, of course, have abundant opportunities of observing certain of the neurotic mechanisms at work in their unhealthy surroundings, and making use of these in their turn. This psychic contagion will create a certain predisposition to the subsequent production of the same forms of neurosis, which may later on be misinterpreted as "directly inherited." Even when two children of a family whose mother suffers from hysteria develop a severe psychoneurosis, one after the other, this need not necessarily be due to the transmission of a pathological, hereditary predisposition; at all events, it must not be accepted as unconditional proof of a direct inheritance. For we must not forget that the siblings may exert a deleterious influence on one another. Freud, for example, in his earliest psychoanalyses of such cases, alluded to the frequency with which sexual games are secretly practiced among brothers and sisters in childhood, which subsequently, on the basis of a sense of guilt, create a predisposition to neurosis. In fact, according to Freud, the child who took merely a passive part in such games—usually the younger sister—would be inclined to develop hysteria, while the active partner (the brother) would be more liable to evince a predisposition to obsessional neurosis, since in him the sense of guilt would be stronger, and therefore more likely to evoke an obsessional-neurotic overcompensation on behalf of the "moral ego." Stekel also has given several impressive examples of such connections, which throw a brilliant light on the role of the acquired predisposition. At all events, such examples suggest that in very many cases where we find severe psychoneuroses in several members of a family, the genealogist would be ready to accept these affections without reflection as evidence of inheritance; but in reality there is only a pseudo-inheritance. Freud's examples throw an interesting light on the problem of the "choice" of neuroses: that is, on the question why a patient should develop just this and no other form of psychoneurosis, while a second person, who grew up in the same environment, and was exposed to precisely the same "psychic traumata," would be the victim of quite a different form of neurosis. Of course, in such cases, apart from the psychic predisposition acquired in consequence of the experiences of childhood, the nature of the

congenital instinctual constitution must play an essential, and perhaps a decisive part. But more of this in the next lecture. It should be remarked, however, in respect of the "psychic contagion" of which there was mention just now, that this may not be due exclusively to the imitative instinct which is so strongly developed in children, but that the dynamic factor, the reason why one of the parents—perhaps the ailing mother, and not the healthy father—is copied, is rooted in the deeper levels of the unconscious. The imitation may be due to the unconscious endeavor to identify oneself with the parent in question—a striving for identification which has its ultimate root in the oedipus complex. The imitative instinct obtains its direction only through this complex. But of this, too, more will be said later.

If we wish to draw a conclusion from all this, we must in any case beware of an uncritical assumption of a direct or indirect inheritance of hysteria and the other great psychoneuroses without decisive proof. This warning also has its practical, psychohygienic aspect: Anyone who superficially assumes the only too convenient standpoint that hysteria is a constitutional and hereditary affection, will naturally not be particularly inclined to take all possible pains with the therapeutic treatment of such patients, since he will tell himself that after all nothing much can be done for them. On the other hand, if he adopts the point of view to which I have just referred, he will know how often in such cases one is dealing merely with a pseudo-heredity; he will take a more optimistic view of the case, and will at least make an attempt to deal with it by means of psychoanalytic methods. At the very least, he will try as far as possible to elucidate the individual prehistory of the patient by a thorough psychoanamnesis before he decides that any attempt to influence the patient by psychotherapeutic methods would be futile.

Nevertheless, we can accept the view that every severe psychoneurosis—quite apart from any such individually acquired predispositions as I have mentioned—must be based on some sort of inherited predisposition. That this is so seems to be shown by the fact that in the war only a fraction of those soldiers who were exposed to the severest ordeals, such as hours or even days of drumfire, bloody assaults, and the like, developed hysterical symptoms. On the other hand, as the result of such severe ordeals men who have inherited

a perfectly sound constitution may develop a temporary hysteria—that is, exhibit hysteriform symptoms, which usually, as a matter of fact, very quickly disappear on the application of an adequate therapy; while only those who are predisposed react to such traumata with severe and protracted hysterical syndromes—that is, develop a true war hysteria.

As regards our knowledge of the inherited pathology of the obsessional neuroses, we seem today to know rather more about these than we know about hysteria; although here again the experts differ widely. Krafft-Ebing, many years ago, described cases of obsessional neurosis in two sisters; Oppenheim in three sisters; while Pilcz described four cases of its simultaneous appearance in parents and children. Meggendorfer recently published the genealogical tree of a family whose founder lived 250 years ago. Concerning the living members of this family, obsessional neurosis appeared in the same form in two distant relatives. Fuchs observed a bad case of obsessional neurosis in an epileptic, whose mother had been epileptic for a period, and had at the same time suffered from obsessional neurosis. Many other psychiatrists, including Bleuler, have drawn attention to the frequency with which obsessional neurosis occurs in the same family in apparently the same form. It is therefore understandable that some authors (and above all Hoffmann) should be inclined to assign obsessional neurosis to a hereditary sphere of its own, on the ground of a special "obsessional-neurotic character" which can be similarly inherited as such. On the other hand, Kehrer and Luxenburger hold that the hereditary basis of obsessional neurosis is not yet sufficiently elucidated. Kehrer speaks of a very conspicuous schizophrenic taint in two obsessional neurotics, while in the many families of schizophrenics which he examined he found no further cases of obsessional neurosis. Luxenburger, with 124 cases at his disposal, endeavored to indicate the genealogical course followed by obsessional neurosis. He found, amongst his cases, thirty-three schizophrenics and seventeen cases of manic-depressive insanity with obsessional syndrome, and of these cases some were suspected of schizophrenia. It was possible to make a closer genealogical examination of seventy-one cases. Among them he found a number of cases which gave the impression that the obsessional syndrome had appeared as a new and only temporary feature imposed upon the basic

personality, whereas a second group gave the impression that the obsessional neurosis had since puberty been slowly evolving from the personality itself. Thus, one must distinguish between temporary and exogenous obsessional-neurotic symptoms, as a purely psychogenous syndrome, and a genuine obsessional disorder which develops organically from a constitutionally abnormal personality. These "anankotropic" types of personality according to Luxenburger's description, should, Panse thinks, be included in Kretschmer's category of schizothymics. Luxenburger himself assumes a close relationship between obsessional neurosis and the endogenic schizophrenias, since in the course of his inquiry he found the number of schizophrenics who were blood-relations of the so-called "anankasts" (= obsessional neurotics) was very considerable. Of the adult brothers and sisters of the "anankasts" whom he examined 46 per cent were abnormal; of these abnormal subjects 68 per cent were schizoid, 22 per cent cycloid, or schizoid-cycloid. The percentage of abnormal parents was even higher: 66 per cent. Of these 62 per cent were schizoid. Among the mothers the cycloid element was more evident. 15 per cent of the fathers, but only 6 per cent of the mothers suffered from obsessional neurosis. My own observations appear, on the whole, to confirm Luxenburger's opinion; at all events, from my analyses of obsessional neurotics I gained the impression that the schizophrenic element was exceptionally well represented in the families under consideration. Such impressions, of course, must be neither overvalued nor disregarded; but one may say that in the course of a comprehensive analysis the psychotherapist gradually obtains a fairly complete notion of the constitutional peculiarities of the families concerned.

In contrast to Luxenburger, Bonhoeffer claims to have noted closer relations between obsessional neurosis and circular insanity than between the former and the group of schizophrenias. He, and also Stöcker, drew attention to the frequent occurrence of slight manic-depressive disorders in the ascendants of the obsessional-neurotics, and also to the significance of consanguinity. K. Schneider reminds us that genuinely obsessive ideas often occur as a temporary, concomitant syndrome of slight endogenic depression, and occasionally also at the beginning of schizophrenic processes. Lastly, Hoffmann and Kehrre point to the striking frequency of sexual

perversions among the blood-relations of obsessional neurotics, and Kehrler held it as almost certain that some sort of anomaly of the sexual constitution was one of the basic conditions of obsessional neurosis.

Panse rightly draws the conclusion from the results to which I have just referred that the obsessive syndrome can hardly be regarded, genetically, as possessing a simple or uniform structure. He too recognizes the conspicuously intimate alliance between sexuality and obsessional neurosis. Strohmeyer sees in the sexual perversions some sort of faulty composition (mixture) of the internal secretions. In persons of an obsessional-neurotic character—that is, persons who are pedantic, scrupulous, and liable from youth to moral anxiety—the awareness of perverse instinctual tendencies may have particularly serious consequences—i.e. may lead to obsessional neurosis. Strohmeyer, guided by the results of psychoanalytic research, traced morbid excess of scruples to masochistic roots, interwoven with the sadistic counter-complex. Panse summarized his conclusions thus: “Even the most inveterate believer in the purely psychogenic genesis of obsessional neurosis must acknowledge that hereditary factors play a decisive part in so far as the unconscious psychic elaboration of instinctual experiences in various blood-relations may always follow the same course, especially in family groups which contain far more than the average proportion of anankasts,—a group which, on the whole, does not occur with especial frequency.” With this statement one can unreservedly agree.

If, then, on principle we support the thesis that at the beginning of every severe chronic neurosis a congenital predisposition must be postulated as a primary pathological factor, we are immediately confronted with a further question: In what does the hereditary predisposition to psychoneurosis really consist? If it is not to remain a mere empty expression we must conceive it as some sort of concrete morphological or physiological influence affecting the central nervous system of the affected person. Possibly it may constitute a diminished power of resistance toward the instinctual conflicts occurring in later life—conflicts of collisions (of which we spoke in the introduction) which are inherently unavoidable, so that in the long run no human being is entirely ignorant of them. We might conceive this diminished power of resistance as implying that the pre-

disposed individual is unable to deal with these collisions in the normal way; in short, that he cannot deal with them so effectively as the normal person. In the present state of our knowledge we cannot do more than conjecture; yet there are two factors which we ought to take into consideration, two factors which might be described as

- a) a morphophysiological, and
- b) a functional (psychobiological) predisposition to psychoneurosis.

a) The morphophysiological predisposition: The factors at work here were briefly indicated at the conclusion of the fourth lecture (p. 82f.). We said then that it is quite conceivable that a primary, congenital weakness or insufficiency of the chemical filter of the brain might represent the morphophysiological basis of the primary liability to psychoneurosis. On the other hand, we must not attempt to explain the individual symptoms—for example, the conversion symptoms of hysteria, or the individual phobias or obsessive ideas—on this basis, if only because in the psychoneuroses we are dealing with primary instinctual disorders, which are provoked by exogenous excitations; that is, through the agency not of the vegetative, but of the cerebrospinal (“animal”) nervous system. In the last resort they proceed from the sovereign cortex. But it is, as I have said, conceivable that a primary insufficiency of the ecto-mesodermal barrier should be held partly responsible for such abnormal forms of excitation and consequences of excitation as we observe in hysteria, the phobias, and obsessional neurosis. To this endocrine-vegetative element we should add, as a predisposing factor of at least equal importance, a congenital lability, weakness or insufficiency of the vegetative midbrain apparatus, and above all of the extrapyramidal system, especially of the stem ganglia—an innate functional debility which would lead either to an enhanced inhibitory responsiveness, or to the very reverse: the former, perhaps, more usually in obsessional neurosis, and the latter in hysteria, while in the phobias and anxiety neurosis the primary insufficiency of the chemical filter, in conjunction with an enhanced excitability of the medial nuclei of the midbrain, would play the principal role in respect of the tendency to anxiety which is here so conspicuous. This hypothesis, in my opinion, would very well explain the basic physiological disorders

of the psychoneuroses: for example, the abnormally enhanced auto- and hetero-suggestibility; the increased tendency of hysterical patients to reject, side-track, and finally repress all painful impressions; their inability to establish a psychical synthesis of all operative impressions as soon as any of them are painful to the consciousness; the enhanced tendency to the fixation and stereotypes of certain movements of alarm and defense, such as lie at the root of the conversion process; the increased disposition to transference of affect, but also the primary, increased emotional ambivalence of the compulsive neurotic—and lastly, the exaggerated tendency to anxiety of the phobic.

b) In addition to these entirely hypothetical morpho-physiological dispositions a second disposition must doubtlessly be assumed—a functional-biological component of the constitutional disposition to psychoneurosis. And this innate psychical disposition, according to what we know of it today, is just as important as—and possibly more important than—the primary insufficiency of the chemical filter and the innate lability of the midbrain system which von Monakow assumed to exist. We may perceive it with comparative certainty in a primary alteration of the innate instinctual constitution. In so far as the predisposition to psychoneurosis, or rather, to the neurotic mode of reaction, is supposed to depend on actual alterations in the composition of the chromosomes—that is, actual changes in the genes—these changes must exert a predominant influence over this very factor of the innate instinctual constitution.

What do we mean by the innate or congenital instinctual constitution? In order to answer this question we must make a brief excursion into the province of the general biology of the instinctive and impulsive life—that is, we must of necessity consider the problem of instinct. This shall be the task of our next lecture.

II. THE THEORY OF INSTINCTS

Ninth Lecture

A. BIOLOGY OF THE INSTINCTS, THE IMPULSES, AND THE INSTINCTUAL CONSTITUTION

Ladies and Gentlemen:

In a brief evaluation of Sigmund Freud's life work from the standpoint of the biologist, perhaps no more significant statement can be made than this: that from the very beginning it was inspired by and founded on an essentially biological outlook.¹ At a time when the so-called "school psychology" had reduced the psyche to little more than a soulless mechanism of "sensory experiences" (constantly confusing the instrument of the soul—the cerebrospinal apparatus of perception and reaction—with the soul itself), Freud discovered that all psychic phenomena are primarily conditioned by drives. As a matter of fact, nothing is so characteristic of Freud's fundamental attitude as the fact that, proceeding from his psychoanalytic theory of the neuroses, which, to begin with, was elaborated from an enormous number of purely clinical data, this profound thinker finally, with unerring logic, developed it into a general theory of instinct. In this, for the first time, psychology and psychopathology are brought into line with biological psychology, which Freud himself described, not by this term, but as "metapsychology." These "metapsychological" (psychobiological) studies of Freud's are based on the view that the psychoneuroses, in the last resort, stem from a conflict of "drives." The symptoms of neurosis, according to Freud,

¹ This has constantly been forgotten by Freud's numerous critics, who have accused the great investigator of "sheer psychologism," thinking to dispose of his theory as a mass of ingenious, but scientifically inadmissible and "fantastic speculations." These critics have apparently forgotten that Freud, before he ventured upon the investigation of the neuroses, was engaged for nearly twenty years in research into the problems of clinical neurology and cerebral pathology, and that he had published a number of valuable and even fundamental works on organic neurology (cf. concerning Freud's achievements in the province of organic neurology, R. Brun, 1936).

are nothing more or less than the expressions, the manifestations of this instinctual conflict, and in the last resort the result of an unsuccessful compromise between the incompatible claims of two conflicting impulses. That the neurotic shows himself incapable of dealing with his instinctual conflicts in a normal manner, may be due partly, as you heard in the last lecture, to the fact that in his case there are certain anomalies of the innate instinctual constitution, owing to whose operation he is in many respects at a disadvantage compared with normal persons. In any case, these considerations show that the instinctual life is of decisive importance in the genesis of the neuroses. A knowledge of the general biology of the instinctual and impulsive life (the problem of the instincts) is therefore an indispensable premise of a general theory of the neuroses.

Above all, the biological definition of the instinct concept has to be clarified. The concept originated in mediaeval scholastics, subsequently underwent a number of changes,—as is well known—before modern natural science took hold of it and, on the basis of its inductively acquired knowledge, critically revised the various theological and philosophical speculations. Experimental animal psychology, in particular, assumed the leading role therein; and we are indebted to the exact biological and physiological methods in analyzing life manifestations of insects for the most significant results in this field.

Careful observation of the life of insects reveals their carrying on of a number of highly complicated activities. With some groups, for example with ants and bees, these activities actually resemble human skills and therefore they impress the naive observer as being well-considered, purposeful, intelligent actions directed toward a definite goal. Indeed, not so very long ago even renowned scientists like Brehm, Buechner, Marshall and others did not hesitate from drawing such naive analogous conclusions from their observations, correct though these were in themselves; thus they endowed ants with highly developed intelligence and high moral virtues; in fact, they raised these creatures actually to the rank of intelligent Lilliputians. After the complete breakdown of this "anthropomorphic school" the "analogy method" in animal psychology, in its application upon the psychic manifestations of higher animals, was seriously compromised. Therefore psychologists began to look for criteria which would

permit a psychological analysis and interpretation of animal behavior in an objective way: i.e. independent of the arbitrariness of personal opinion. The mneme proved to be such a criterion. Indeed, the phenomena of memory are the only psychical manifestations which at any time and unconditionally permit of an objective physiological analysis. By means of the "mnemonic experiment" (Brun) it is possible in almost every case to decide with a high degree of certainty whether or not a certain reaction observed in an animal is based upon the previous acquisition of individual mnemonic impressions (engrams), respectively whether or not it was concurrently conditioned by the ecphora of individually acquired engram complexes.

Two examples from the life of ants may serve to illustrate this:

1. One of the common robber ants, the *Formica sanguinea*, habitually carry out raids against the brood of a smaller species of black ants (*F. fusca*), whereby they apply characteristic martial tactics. The *Sanguinea* do not eat the captured *Fusca* pupae but nurse them carefully like their own brood and bring them up to become "auxiliary" ants, or so-called "slaves." *Per se* this serfdom of ants could very well be an intelligent usage, acquired through experience; it would be conceivable, for instance, that the young *Sanguinea* learned their predatory trade and the rearing and enslaving of the *Fusca* pupae anew from generation to generation from their older, more experienced, sisters. E. Wasmann decided this question by means of a simple experiment. Wasmann isolated a number of very young robber ants which had just crept out of their pupae and set them up in an artificial "colony of autodidacts." When later he put a number of *Fusca* pupae into a receptacle connected with the *Sanguinea* nest by a long glass tube, the *Sanguinea* at once and eagerly collected the pupae, reared them in their nest and enslaved them instead of eating them up, although they never had had instruction from their allegedly more experienced older fellow-ants (from whom they had been separated immediately after having crept out); therefore they could not possibly have been aware of the expediency of their action. In a parallel experiment Wasmann offered a number of *Fusca* pupae to a related species of common forest ants (*F. rufa*) which are not known to be slave holders; the *Rufa*, too, collected the pupae, but ate up all of them.

It follows that slave holding on the part of the *Sanguinea* is not an intelligent, acquired usage but an inherited species reaction, which appears with every individual of the same species as a primary automatic action— independent of experience.

2. Now for the counter-process: In their slave raids the *Formica sanguinea* often cover long distances of twenty to thirty or more yards; they will cross most heterogeneous territory and yet, after having pillaged the *fusca* nest, they will find their way back to their own robbers' den with infallible certainty. Is this, perhaps, also a matter of a hereditarily innate mechanism, possibly some mysterious "nest tropism," "homing instinct," or the like? This is by no means so. Once, while observing such a slave raid, I removed several *Sanguinea* which

had not participated in this raid, directly from their own nest and exposed them near the pillaged *Fusca* nest. For hours these individuals circled about helplessly and showed themselves completely unable to return home. The ability of ants to return home, therefore, is obviously not based upon an innate mechanism but consists in a mnemonic achievement, the attainment of which unconditionally requires the previous acquisition of individual mnemonic images (engram complexes) of the character of the territory covered on the way out.

The mnemonic experiment thus leads us to divide animal reactions into two basically different categories; first, in hereditarily preformed species reactions and, second, in individually acquired reactions. Following Forel we designate the reaction type of the first category as primary or hereditary automatism, whereas the reactions of the second kind are called "plastic" or individually acquired adaptive reactions. This classification has proved very expedient: above all, it has freed animal psychology of its former problematic character and has once and for all put it on the basis of an exact biological science, namely that of a physiology of the individual mneme (Brun, 1914). This has the great advantage of eliminating the question whether or not a certain animal reaction is accompanied by "consciousness," because the concept of the "psyche" in animal psychology has been identified with the proof of individually acquired memory phenomena. Furthermore this classification provides a basis for an exact biological definition of the instinct concept: the great majority of biologists are agreed to understand by "instincts" hereditary automatisms exclusively; i.e., hereditary species reactions, preformed in and based upon the innate organization of the nervous system, released under the influence of a specific stimulus situation and, in principle, developed independently of any previous experience in obedience to the same inner laws as, for instance, the complicated catenary spinal reflexes (Spencer, Loeb, Darwin, Driesch, Forel, Buttell-Reepen, Bethe, Weismann, Hering, Semon, H. E. Ziegler, Greppin, O. M. Reuter, Wheeler, Claparède, L. Morgan, Ernst, Brun, Frisch, Lorenz, and many others). We can do no better than to illustrate this point of view with the statement of the great physiologist Hering: "Instinct is the memory of the species."

A few, more recent philosophers, such as Wundt, McDougall, Myers, Titchener, Thorndike, Bergson, et al., have expanded this conception of instinct in a way that is, to my mind, inadmissible. They understand by instinct not only such inherited reactions as are performed *in toto* as complete structure automatisms in the nervous system, but the whole functional inherited disposition of

a most specific kind of food, and the young caterpillars, immediately after having crept out of the egg and previous to any taste experience will with infallible certainty, probably by means of smell, find, identify and choose this species-specific, instinct-adjusted "adequate" food object out of hundreds of other leaf species.

Von Uexküll has recently described this object representation specific to the species—that is, the excitation complex of the outer world, which is able to evoke an instinctive action—by the pertinent expression "schema," which means: inborn schedule. In the psychological analysis of such a schema, it emerges that the animal sometimes reacts only to one quite simple feature of the environmental scheme (or to only a few features) with the specific instinctive action. If an artificial lure exhibits this one specific feature, it can always evoke the adequate instinctive action in all its phases, just as the adequate object representation of the instinct evokes it (Lorenz, Tinbergen, etc.). In a state of Nature, of course, the specific feature belongs as a rule only to the adequate object of the instinct—for example, in the case of the sexual instinct of the male, to the female; so that such errors of instinct as can be experimentally produced by means of a lure will very seldom occur in the open.

With higher animals, however, and above all with man, such a close connection between the drive and the pre-ordained drive object as a rule is no longer extant; or such intimate *a priori* object relations only exist with regard to certain primal impulses of the suckling; for on this level the impulse is preserved in the hereditary memory only in the form of certain innate dispositions to act. Thus, for instance, there appears with every human being at a certain phase of his childhood development the urge no longer to satisfy his physical pleasure sensations by means of his own body but to find other objects for this purpose. It seems, however, that these objects themselves are no longer strictly pre-ordained in the hereditary memory; they may, for instance, be human beings of the opposite as well as of the same sex—and the drive may even become connected with inanimate objects and may consequently result in the most peculiar so-called perversions. (On the other hand, according to C. G. Jung the so-called archetypes, in the shape of typical, intuitive forms of conception—congenital, inherited symbols, cf. Lecture 2, p. 29—are contained in the collective unconscious—that is, in the hereditary mneme; inherited forms of perception and conception.)

Von Hattingberg has pointed out that such examples may be observed even in young chickens. The chicken just out of the egg shows an irresistible impulse to run after the mother hen wherever she goes. But if we now take a newly hatched chicken away from the hen and put it in a room by itself, it immediately runs after the first living creature that it happens to see; after the poultry keeper, for example, or after a dog or a cat if one happens to be present. And its impulse to run after some other creature is now permanently tied, for weeks on end, to this heterogeneous creature, so that if this chicken is now returned to its own mother it completely ignores her.²

² This occurrence, first described by von Hattingberg in 1921, was recently rediscovered by Lorenz (1935) in other species of birds, and was described by him as a process of Praying. This "stamping" or "impressing," in my opinion, is only a special case of that more general process (widely distributed in the animal world) of the

It follows that under certain circumstances higher animals or man can transfer a drive upon objects which are foreign to the species. What is inherited in the strict sense of the word is only the specific kind of activity (in the above case, therefore, the imperative urge: "I must follow closely") but not the object with which something must be done (von Hattingberg).

When we consider conditions with higher animals and with man we must therefore not restrict the concept of instinct to the instinctual action, but we doubtless must expand it to cover the innate individual predispositions to act. These constitute essentially what we understand by innate drive constitution of man. The manner in which these innate predispositions are being realized in the course of life and the objects towards which these drives are being activated depend to a large degree upon individual experience, just as the object representation of a drive can only be gained through experience. Apparently the inherited predispositions to act constitute, as potential energies, as the motor of the instinctual phenomenon, the essential part of the instinct. In contrast, the mechanism of action, i.e., the action itself organized as it is in the manner of a chain reflex, represents only the instrument which the instinct utilizes for its realization. The mechanism itself is inherited only with lower animals and in this case is called "structural automatism" (Brun) because, like a reflex, it appears determined by the mere anatomic structure of the nervous system. In the third place we have to distinguish in a drive its object representation; this, also, can be fixed hereditarily as a "gestalt engram" but, as recent investigations have disclosed, that is not regularly the case even with insects.

Having thus defined the upper limit of the concept of instinct—that is, after its demarcation from the activity of the acquired (embiontic) mneme and its operations in the direction of mental life, we have still to delimit it in the opposite direction—that is, from the rest of the phenomenal forms of the inherited mneme. We have seen that in the lower animals—the insects; for not only a general disposition to behave in view of a certain goal and in a certain direction, but also the realization of the behavior as a so-called "instinctive action" is often fixed, in all the details of its progress, in the inherited memory of the species. For this reason, indeed, instinct is described by the biologists simply as "hereditary automatism." But there is a host of other hereditary-mnemic processes which are not usually subsumed under the notion of instinct: such as the ontological processes, in so far as they depend on the so-called "self-differentiation of the embryo," the organic processes of assimilation, growth, procreation (cell division), regeneration, the tropisms of cells, and finally the reflexes of the visceral and central nervous systems. In all these processes—some of them extremely complicated—which as regards their form are accomplished in strictly successive phases, there is at work an internal autonomy which is by no means

transference of an impulse to an inadequate object: thus a process which I, myself, described, and whose significance I first recognized, in 1920, and again in 1926, on the basis of experiments with ants, some of which go back as far as 1910 and 1911. In birds and mammals, according to Lorenz, "impressing" is possible only in early youth; if the adequate object of impulse has once been secured, and the impulse fixed upon it, the process of "impressing" cannot, as a rule, be subsequently reversed. This, however, is disputed by Bierens de Haan. Like myself, this author conceives the process of "impressing" as an influencing of the instinct by an *intra vitam* acquired individual experience, that is, a phenomenon relating to the plasticity of instincts.

to be explained merely by the influence of external stimuli—that is, by the special mechanical or chemical conditions of the environment, of the external dynamic (energetic) situation—but whose essential causes are undoubtedly founded on the inner potencies of the hereditary mneme. Hence, there are writers who speak of an “organic and cellular memory,” and even of the “soul” of organs and cells—Bleuler’s “psychoide.” Now the question arises: is it really possible to draw a sharply defined frontier between these vegetative-organic hereditary automatisms and those complex animal-motor reactions which we have described as instinctive automatisms or instinctive transactions in the narrower sense of the adjective? Or ought we not rather to include both phenomena of the hereditary memory in the same conception—for example, describing reflex activity as instinct-automatism of a lower order, and consequently to speak of “evolutionary instincts,” “cellular instincts,” “organic instincts,” etc.? As a matter of fact, such an integral way of regarding these phenomena has actually been adopted by many recent biologists: thus, Weismann, Bethe, Loeb, Spencer and Driesch, E. H. Ziegler, von Buttel-Reepen, Claparède, Lloyd Morgan et al. define the instincts simply as “compound chain-reflexes”; thinking more particularly, no doubt, of the complex multiphase instinct-automatisms of the insects and others of the lower animals. The similarity between the compound instinctive actions of these creatures and the reflex automatisms is indeed striking: in them we often see an absolutely peremptory successiveness in the phases of the process, a rigidity, which is by no means inferior to that of the reflex automatisms of a spinal cord divided from the cerebrum. The action, once begun, must under all circumstances be continued to the end, even against the better testimony of the sensory perceptions. The course of such an instinctive automatism seems to be determined entirely by an internal successive self-induction, or by the so-called phasogenic ecphoria of Semon—in such a manner that the completion of each phase of the action ecphorizes—that is, evokes or releases—the next following phase; just as Sherrington and von Monakow have demonstrated in the proprioceptive chain reflexes of the spinal cord.

We must, however, take the following exception to this parallel: compared to the course of an instinctual action (if you will just think of the slave raids of the above-mentioned robber ants) even the most compound chain reflex is only a partial phenomenon within a more comprehensive occurrence. If, for example, the spine has been detached from the cerebrum it will, in spite of all its inherent automatisms, be unable to produce continuous actions proper. Whereas even in cases in which the entire course of action in all its details has been fixed in the hereditary memory the instinctual mechanism bears the character of a phenomenon involving the individual as a whole, as an acting “person.” The geneous reflex automatisms, which, by means of co-ordinated cooperation of sensory perceptions and in accordance with the vital interests of the species, are being integrated to a goal-directed, oriented whole, i.e., to action. This integration, however, presupposes the existence of a plan of action. Thus the reflexes represent only the material with which the instinct works; their relation to the entire complex of the instinctual action parallels that of the bricks to the house. Or, in functional terms: the reflex automatisms are first set in action by the instincts, and as such are made to serve a superior whole; and the instinctive action always appears to be orientated upon a goal. For example, the dog bitten

by a flea immediately sets the mechanism of the scratch instinct functioning, in order to abolish the stimulus of the itching. In a cat whose dorsal spinal cord Minkowski had severed on one side he was quite able to evoke the scratch reflex by tickling the rump on the side of the resection, but the "scratching" hind leg no longer reached the tickled spot, the rhythmical scratching movements being aimed at quite a different place, or even "made in the air." This is a striking example of the way in which a complex reflex-automatism changes with different conditions. As long as it is in normal connection with the totality of the intact organism, the reflex-automatism serves a "purposeful" function. However, as soon as its organic connection is broken artificially thereby losing its instinctive component, the automatism loses its "final" character and henceforth proceeds to operate as a meaningless, separate mechanism in isolation. The same phenomenon of aimless operation was also described, as you will learn later (in Lecture 13) by Lorenz, on the level of the instinctual life of birds.

In this connection, of course, the expression "final" is not to be understood in the sense of a (conscious or even unconscious) "purposeful orientation," a "subjective striving for a goal"; it simply means that the operation of the preformed mechanisms in question is directed beforehand in a definite manner. This objective finality of the discharge proceeds quite automatically from the rigidly chronogeneous superimposition of the hereditary engram complexes involved, which, therefore, in the phase of realization, achieve their psuogenic euphoria, according to a previously established order or succession as it is fixed in the inherited mneme.

On the other hand we learned that even the compound reflexes, up to a certain degree, have such a final character; especially as we descend in the animal kingdom. You heard in the fourth lecture (p. 65) that the reflex mechanisms in question are often not exclusively dependent on the specific stimuli of the external energetic situation, but that in some degree they depend also on internal chemical alterations. This is the case, for example, in the embracement-reflex of the male frog, which normally can be provoked only during the breeding season. In other compound reflexes spontaneous variations of irritability, and of the reflexogenous zones, and even sometimes the entire absence of response, are observed, even during the apparently complete constancy of the external energetic conditions. For example, according to P. B. Hadley the larva of the lobster (*Homarus americanus*) during the first sixteen days of its development exhibits four times a change from positive phototropism to negative. Such spontaneous variations of reflex can apparently be explained only by endogenous (chemico-hormonal) excitatory influences. Here, too, we are undoubtedly justified, up to a point, in speaking of "spinal instincts." And if we descend still farther in the animal kingdom we see the whole life program of these unicellular creatures realized in the manifold tropisms of the Protozoa and can no longer refuse to admit the existence of "cellular instincts" (Jennings, Verworn, E. Bleuler, von Monakow).

Thus, the complex-inheritance of preformed structural automatisms in the form of biologically valuable integrations increases constantly as we descend in the animal kingdom, and diminishes as we ascend. The higher an animal stands in the animal kingdom, the more incomplete, in the biological sense—that is, the less adapted to suffice in themselves for its entire vital economy—are its innate structural automatisms. This fact is connected with a phylogenetic law, which

comparative cerebral anatomy entitles the "Law of the wandering of the function to the frontal extremity"—or "law of cerebrations" (Steiner, von Monakow). By this we understand the interesting fact that in the course of the history of the race there is an increasing "plundering" of the phylogenetically ancient brain and spinal nerve centers, in the sense that these increasingly surrender their function to the phylogenetically young neo-encephalic parts—the cortex—and retain only individual components of the more and more complicated total integration of the various biological functions, while at the same time their activity becomes increasingly dependent on the direction of the phylogenetically younger parts of the brain. Fundamentally, this is much the same thing as the increasing division of labor with the progress of civilization in human communities.

So much for the relation of the instincts to the reflexes. As regards their relations to the vegetative structural automatisms, Loeb and Driesch have recently pointed out that it is difficult or impossible to separate the instincts from the vegetative processes of growth and development, inasmuch as these frequently appear to be most closely connected with the morphological structure of the organism. In the lower animals, above all in the insects, this connection is indeed quite conspicuous; not only every instinct, but, very often, even every individual phase of the compound instinctive actions of those creatures has its own (often only temporary) organs, whose structure seems to be most exquisitely adapted to the purpose which they serve. In the larvae of the insects we see, accordingly, that as soon as a particular organ has taken shape the corresponding instinct appears; thus, caterpillars begin to spin their cocoons as soon as the silk-glands have developed. During the metamorphosis an extensive involution of the silk-glands takes place; their sparse remains are transformed into salivary glands. Here the body actually produces the material with which the instinct works (Reuter). There are cases in which even the mature insect, the imago, discards an organ when the instinct which it served has achieved fulfilment; thus, the female ants, after the nuptial flight—or after fertilization—automatically discard their wings, and their wing-muscles, as Janet was able to demonstrate, immediately undergo a complete histolysis. On the other hand, the unfertilized females do not put off their wings. Thus, in this case fertilization constitutes an adequate stimulus for the evocation of the impulse to strip off the wings. In the winged sexual forms of the termites, on the other hand, fertilization, according to E. Marais, takes place after the nuptial flight, and the wings are discarded immediately after the insect has alighted, even if no pairing has taken place. Insects which have never taken part in a flight retain their wings throughout life, while, on the other hand, a flight of a few yards is enough to evoke the impulse to discard the wings. In the case of the termites, then, flight as such is the adequate stimulus for discarding the wings. In many birds and mammals the appearance of sexual excitement seems to depend, not only on the periodical growth of the sexual glands, but also on the periodical appearance of certain secondary sexual characters, such as the secretion of certain odorous substances, or the display of certain ornamental colors (the nuptial plumage, etc.).

At first sight, the relations of the instincts to the development of the embryo, to ontogenesis (in the stricter sense) appear less conspicuous—at least, as regards the higher animals, in which the instincts begin to function after the ontogenesis is, in essentials, concluded. But we must not forget that most of the lower verte-

brates, and all the invertebrates, pass through a biologically complete larval existence during their embryonal period. This existence has its own complicated instincts, most of which are entirely different from those of the mature animal. And every phase of this larval existence has its own special executive organs. Parallel with the metamorphosis there is a complete transformation of the instincts. Perhaps this circumstance is best described by Bergson's saying, that the instincts are "the continuation, or rather the completion of Nature's work of organization." In addition, there are certain cases in which we can actually observe a direct transition between organic processes of growth and development and instinctive actions, so that we are often in doubt as to which of these expressions we ought to apply to the proceedings in question (Wheeler). The majority of insects, on pupation, exude a simple sheath of chitin on the surface of their epidermis; others spin, before pupation, an ingeniously constructed cocoon, in whose fabrication the head and upper part of the body have to make a series of precisely predetermined and complicated movements. Is the construction of the cocoon thus a merely "vegetative" developmental process? No, it is undoubtedly a complicated instinctive action. In other words: here the instinctual function does not merely appear to be the continuation of the organic development, but is actually identical with it.

These last facts all tend to demonstrate that the instincts—whether they find expression in the plastic instinctual dispositions of human beings and the higher animals on the one hand, or whether they appear fixed in every detail by inherited memory, in the automatisms of the insects and other lower organisms—represent only the functional aspect of a universal, dynamic, primal principle. This principle was aptly designated by von Monakow as the *Horme*, and defined as the genetic mainspring, the potential energy or living protoplasm, which contains, *in nuce*, the entire life program of the creature, and successively unfolds this program in the individual in accordance with the engram store of the species, stored in the hereditary mneme, constantly adapting it to the environment.

We can therefore briefly summarize the biological significance of the instincts as follows:

The instincts, as functional forms of the Horme, integrate, in accordance with a latent life program fixed in the inherited memory, all the vital activities of the organism in the sense of a "self-direction" toward an objective predetermined or finally orientated whole, and represent at every moment the vital interests of the species, and of the individual, as against the environment.

So far we have apparently used the words "instinct" and "drive" indiscriminately, and, indeed, some authors use them as synonyms.

However, in the interest of clarity it is commendable to distinguish strictly between the two expressions as follows:

We call instinct the total hereditary mnemic complex, even in the latent state—that is, as the latent property existing in the inherited engram store of the species, and therefore also in all its embionic phases of realization.

The instinctual impulse³ (drive, or urge) on the other hand, is the evoked or released (ecphorized) hereditary mnemic excitation with its actual relation to the environment.

In a migratory bird, for example, we must presuppose the migratory instinct, even in summer, in the form of a latent hereditary engram complex, but the migratory impulse makes its appearance only for a short period, in the autumn.

It is clear that with the increasing complication, as we ascend in the animal world, of the physical organization which executes the latent life program of the various species, a great number of heterogeneous instinct mechanisms must gradually emerge, each of which is appointed to the performance of a particular vital task. The biologists have always been at great pains to achieve "general classification of the instincts." Most of these classifications, however, do not distinguish clearly enough between the instincts as such and the mechanisms for their execution: that is, the instinctive actions. But of such specific mechanisms of instinctive effectuation we can distinguish as many, in the case of every primal instinct, as there are biologically differentiated animal species. For example, McDougall's "instinct of orientation" is nothing more than an instinctive action in which the exteroceptive (cerebrospinal) functions appear to be already extensively activated, and which is performed in quite a different manner in each animal species, according to its organization. It therefore seems more correct to divide the instincts, to begin with, in quite a general manner, into the instincts of self-preservation and the instincts which aim at the preservation of the species; though in doing so we ought to remember that the *horme*, as the mainspring of all the vital functions, is fundamentally of a unitary character, so that even this division is really an artificial one. As a matter of fact, one sees that the interests of self-preservation and species-preserva-

³ German: *Trieb*.

tion coincide at many points and coalesce. Within these two basic categories the various forms of instinct should be distinguished, not according to the special formation which their mechanisms (the instinctive actions) have assumed in the different species, but according to the principal vital interests, which in all organisms make themselves felt in a similar manner. Proceeding on this principle of classification, we could perhaps distinguish the following forms of instinct:

I. Instincts of Self-Preservation

1. Instincts of development and metamorphosis (moulting, pupation, and their preparatory phases, seeking definite kinds of nook or cover, etc.). Evacuation of waste products of metabolism, cleansing self.
2. Feeding instincts: search for food (wandering when hungry), acquiring food (lying in wait, looting, robbing, begging, etc.), eating.
3. Instincts of protection and self-defense (flight, shamming dead, defense and aggression, preparation of protective shell, creeping into shelter, etc.).

II. Instincts of Species-Preservation

1. Sexual instincts (seeking the opposite sex, wooing, battling with rivals, pairing).
2. Species-distributing instincts (swarming of bees, nuptial flight of ants, migration of fishes, birds, etc.).
3. Parental instincts (nest-building, egg-laying, incubation, care of young).
4. Social instincts: communal nestbuilding, communal search for food, mutual communication (signs and vocal expression), division of labor (common aggression and defense, war).⁴

The release of the instincts—that is, of the hereditary mnemonic engram complexes—is as a rule connected with a complex energetic situation. This comprises substantially the following components, to which, as a rule, as many phases of ecphoria correspond:

⁴ Von Monakow assumed that (at least, in human beings), in addition to the three recognized primal instincts (self-preservation, sexual, and social) there was a fourth basic impulse which he described as the "cosmic instinct," or the "impulse (drive, urge) toward union with the cosmos."

I. Interoceptive conditions:

1. Morphological conditions: that is, the structural preparedness of the hormone-producing, endocrine glands, and of the executive organs of instinct (latent instinctual preparedness);
2. Biochemical conditions:
 - a) endogenous biochemical-hormonal stimuli, which set the vegetative system and the brain in a specific state of excitation, which we call primary instinctual excitation;
 - b) perhaps also exogenous biochemical stimuli; changes in the composition of the blood caused by diet.

II. Exteroceptive conditions:

Ingress of a specific—i.e. an adequate, simple or differentiated sensory stimulus: Realization of the instinct.

Apart from the morphological preparedness, which is the postulate of the function, the hormonal excitations are the most important; at all events, according to recent findings, the endocrine secretion is in itself sufficient to evoke certain instinctual excitations: and much more so—as we heard in a previous lecture—since it supplies, in the form of the hormozones or development-hormones, the chief impetus to the development of the executive organs serving the instincts, as well as the physiological mechanisms concerned. On the other hand, the specific sensory stimuli alone are not capable of ecphorizing the relevant instinct so long as the endocrine preconditions are unfulfilled. For example, in animals with a periodical rutting period the perception of the female outside of this period does not effect the ecphoria of the sexual instinct. Even in the human species there are still perceptible remnants of this “periodicity of the vital excitations” due to periodic variations of the labile hormonal level in the blood. As for the ecphorizing sensory stimuli, they need not always be immediately connected with the instinctual action evoked by them—for example, as the goal of that action. Apart from such differentiated exteroceptive instinctual stimuli, an instinct may be released by such simple stimuli as light, warmth, certain chemical substances in the surrounding medium (simple exteroceptive instinctual stimuli). Thus, Forel found that the initiation of

slave raiding among the Amazon ants (*Polyergus rufescens*) depends in the first place on the temperature.

Now, if an instinct has been powerfully evoked by hormonal means, the subject is afflicted with a general restlessness, which announces itself, in the consciousness of the young human being, the first time he experiences it, merely as an obscure, urgent sense of excitement, without any definite ideational content. Such primary feelings, which at first are objectless, have been described by von Monakow as "primal emotions"; they represent the subjective correlate of the instinctual excitation.

What happens now depends on the nature of the instinctual impulse in question. Here we can observe two essentially different cases, between which there are, of course, transitional forms:

a) In many primitive forms of "drive" the endogenously arising instinctual excitation directly releases the reflex chains of the appropriate instinctive action. Among these are the impulses of defecation and micturation. Here the drive is discharged essentially as a proprioceptive excitation process. We can therefore call such impulses proprioceptive or autistic (in the sexual sphere autoerotic) drives. A specific relation to the environment, an instinctual object (purpose) or schema (pattern) is not in this case a primary requisite, a *conditio sine qua non* of the discharge of the instinctive action. Still, even in the autistic impulses a certain relation to the environment is rarely quite absent; as, for example, where an animal, before the act of defecation, seeks a hiding-place, then, to make sure that all is safe, turns round and round several times on the spot, trampling down the grass, and finally, carefully covers its excrements with earth. In other cases proprioceptive drives require a secondary relation to the environment: namely, through the so-called confluence of these drives with other drives of an exteroceptive character. You will hear more about this process in the next lecture.

b) In other instinctual impulses—they are as a rule the more complex impulses, such as fright, defense (aggression), seeking food, the genital sexual drive, the social impulse—the instinctive restlessness always sets the cerebrospinal orientation-apparatus in motion, and so, beforehand, achieves relations with the environment; exteroceptive or extratensive drives. The organism in a state of instinctual excitation "seeks," as it were, in the outer world, stimulus complexes,

"object representatives" (Freud) or "schemata" (von Uexküll), by means of which the drive can obtain satisfaction. Already in 1919, I recognized the importance of this process, which is a preliminary to the running down of the impulse; I described this process as "*Reizsuche*" (stimulus seeking). An exteroceptive impulse is evoked for the first time in the life of a young animal, or the drive may already at some time have acquired an object, which perhaps has been lost for a time, and has to be acquired again; according to this distinction I differentiate between a primary and a secondary search for stimuli, and therefore between primary object-representatives ("imagines" Freud) and secondary object-representatives or schemata. The secondary search for stimuli is distinguished from the primary by the fact that it is already directed toward a definite goal. This goal corresponds to a definite object engram (acquired schema) which was acquired during the individual life of the animal, and which—as long as the hormonal instinctual excitation lasts—is ecphorized every time the goal of the impulse during the active phase of the instinct is lost. The animal then seeks the lost object of impulse. Or, briefly: the secondary search for stimuli has the biological function of recovering lost impulse objectives. But even the exteroceptive drives do not always require an "object" for the evocation and performance of the instinctive action in question. You will see this later on (Lecture 13) when I speak of the phenomenon of "running to waste." You will then learn the essential facts concerning the dynamic causes of the phenomenon of stimulus-seeking.

The process of seeking for stimuli was recently (1937) rediscovered by Lorenz, who called it "*Appetenzhandlung*" (active appetency or desirous action). By this he means "that performance of an animal which brings the living creature to the evoker of the instinctive action." "Wasps," G. Bally writes in commentary, "which lay their eggs in the larvae of garden beetles run restlessly to and fro on the tree trunks. They are seeking a larva in which they can lay their eggs." It seems to me, however, that Lorenz does not distinguish clearly enough between the procedure of mere "appetence" (see my remarks on stimulus-seeking) and that which occurs later, namely, when an adequate drive-object enters the sphere of the animal's sensory perceptions. From this moment onwards, in my opinion, one should no longer describe the procedure which then leads to the winning—or recovery—of this object as one of appetency, but rather as "*Klisis*" (von Monakow). Moreover, there is something unsuitable in the application of Lorenz's concept of "appetency" to negative impulsive actions, as when there is mention of "flight appetency" (*ad-petere* meaning to strive towards something; flight,

to strive away from it). Here the procedure must in reality be this: through the appearance of an enemy the instinctive action hitherto in progress is suddenly interrupted, and in its place the instinct of seeking safety is ecphorized, together with the appropriate object-representatives—for example, the engram of a hiding place already known to the animal. But then the animal is striving toward the hiding place, not toward flight. "Flight appetency" seems to me a contradiction in terms; for denoting the relation "enemy-flight" I find the expression coined by von Monakow—i.e. *ekklisis*—far more appropriate.

Now, if the search for a stimulus is successful—if the external situation encountered in the outer world, or found by means of the apparatus of orientation, harmonizes with the engram complexes of the primal representative of the instinct laid down in the hereditary memory—then the experience complexes in question, which show themselves to be of a quality to satisfy the drive, are immediately provided with a positive, lustful quality of sensation. There results a violent desire to approach this object, so valuable for the gratification of the instinct ("*Klisis*," von Monakow). In the other event the object or situation in question is from the outset qualified with a negatively toned sensation; it is disagreeably accented, and evokes an active urge to get rid of it ("*Ekklisis*," von Monakow).

The positive or negative censorship of feeling which we apply to all objects and situations ("*Gestaltcomplexe*") of the world of experience—that is, to all our experience—does not originally come from outside us, but is rooted in our primary, hereditary instinctual dispositions. It depends on whether the momentary, actual, external energetic situation is or is not "homophonous" with—does or does not harmonize with—the momentary hereditary-mnemic (instinct; excitation—that is, on the excitation-differential between the hereditary-mnemic and the actual sensory excitation.

All experience complexes thus already *in statu nascendi*—that is, already equipped, on the first reception of the stimulus and on the first engraphy, with definite values of feeling ("*Valenzen*"), now, on every recurrence of a situation which resembles an earlier situation, are, for their part, again in homophony or dysphony (*klisis* or *ekklisis*) with the "drive-situation" prevailing on just this occasion, on the one hand (a situation depending on endocrine conditions), and with the secondary, actual stimulus-situation on the other hand. In this way secondary emotions arise, already equipped with components of experience, for which I should prefer to reserve the name

of affects. Affects which are not evoked by an original external stimulus-situation, but in a purely mnemonic manner, I would propose to call emotions.

Affects in the above sense are therefore, in contradistinction to the primal feelings, evoked by object representatives (Freud)—that is, by already achieved instinctual objects. A definite sensory stimulus, which on its first occurrence was in violent dysphony with an instinctual excitation, will again, on every subsequent recurrence, evoke a lively momentary *ekklisis*. The interference of these secondary situations—i.e. of the secondary experiences—with a primary impulse situation of a different kind, is often accompanied by, or is the cause of, the fact that the emotional value which we attribute to things is by no means constant or stable in all situations and at all times of life; indeed, these emotional values are mostly more or less relative, and according to the momentary “order of battle” of the instincts they are subject to constant change, and sometimes to periodical variations, in one and the same individual: for example, when hunger is sated the sight and smell of dishes which a little while earlier so excited our appetite—our *klisis*—now leaves us cold, or even inspires us with a definite feeling of repugnance—*ekklisis*. Only if the secondary situation harmonizes homophonously with the primary impulse disposition is the same positive affect to be expected, under any circumstances, as on the first occasion of its experience. But if under the contrary conditions a particularly violent *ekklisis* has been provoked, the contingent reaction may easily become fixed for life, and will then, at every recurrence of the situation, be evoked in accordance with the mechanism of the conditioned reflexes. We then have what the physiologists call an idiosyncrasy; in the language of the psychology of values it is called a prejudice.

Gradually, in this way, the whole store of experiences, in the form of increasingly complex levels of sentiment, is affectively organized, and according to the interests of the innate instinctual dispositions, “critically” sifted (“*Protodiakrisis*,” von Monakow). And it follows, from what has already been said, that this affective organization of our experience is by no means fortuitous; it follows certain directions, which appear to be largely determined beforehand by the hereditary memory (von Monakow’s “*Horme*”). For we saw just now

that the manner in which we are primarily affected by things depends in the last resort on the instinctual dispositions which we bring into the world as our heritage—that is, on our congenital instinctual constitution. This fact can be clearly recognized even on the most primitive biological level, and formulated in a law, the law of biological cognizance specific to each species (von Uexküll). For example, a frog remains perfectly indifferent to the report of a gun fired in its neighborhood, while it reacts immediately and briskly to the faint croaking of the female, provided it hears this during the breeding season.

We see, then, that *the instincts constantly exert a far-reaching elective influence over the world of experience—and even over discernment*. Those experiences which are in line with our innate instinctual dispositions, whose realization they favor, are preferred in the search for stimuli as against the negative or indifferent experiences, in accordance with Freud's "pleasure principle," and inasmuch as the orientation turns more and more exclusively to them, they are constantly sought out anew, and so developed and further elaborated.

After what has been said you can now easily appreciate why essential anomalies of the innate instinctual constitution under certain circumstances are of far-reaching importance for the later destiny of the individuals presenting them. Such anomalies, for example, may consist in the fact that single components of the instinctual constitution, single "component or part instincts," as we say with Freud, are primarily present in abnormal strength. And such a constitutional reinforcement, in accordance with the generally valid law of the inheritance of such constitutional anomalies, affects, in the first place, the onto- and phylogenetically ancient atavistic primal impulses, which belong to an earlier, long superseded period of human evolution—and thus, above all the early infantile component or part instinct of which we shall hear in the next lecture. Physiologically speaking such constitutional reinforcement of a component instinct will express itself as enhanced excitability of the relevant pleasure-releasing (erogenous) zone.

That here there may really be in many cases a constitutional predisposition E. Hanhart was able to demonstrate by the constitutional analysis of a family of allergies with corresponding vegetative stigmatization, which he had been

observing for decades. It appeared that in this family a very pronounced anal erotism was accompanied by a predominantly parasympathetic tonic responsiveness of the vegetative nervous system.⁵ And this combination, as Hanhart informed me recently, was inherited regularly, as a dominant, for four generations. This interesting observation shows that the enhanced irritability of an erogenous zone—in this case the anal region—which according to our conception is basic to every constitutionally excessive part instinct, actually corresponds to a biologically comprehensible vegetative partial constitution, which in the above case proved to be genetically anchored.

The consequence of such a primary, enhanced excitability will be that the child will show a tendency to equip beforehand with an especially high sensational valency those impulse stimuli which proceed from this zone, and which therefore comply with (or are homophonous with, as we should say with Semon) the constitutionally enhanced impulse. Therefore, these impulse stimuli will always be preferred above all others in the search for stimuli. Furthermore, on this basis, psychic fixations, prematurely intensive and abnormal, and firmly and deeply rooted in the aberrant feelings of the child, build themselves up on the component instinct in question—affect fixations, which the child will find it very difficult to get rid of later on; fixations to which—at the cost, subsequently, of new cultural acquisitions—he will cling with tenacious energy, far beyond the developmental phase in which the component instinct plays its “justified,” natural (physiological) role.

Thus it is almost inevitable that subsequently there should be collisions between these impulse fixations and the ontogenetically younger cultural (aesthetic, social, ethical, religious) counter-impulses: in other words, there will occur that conflict of impulses of which we spoke at the beginning of this lecture, when we described it as the starting point of the psychoneuroses.

This conflict of instinctual impulses, as we have indicated, takes place between the phylo- and ontogenetically ancient primal impulses and the phylo- and ontogenetically younger and remoter descendants of these primal impulses. We can therefore call the former primordial impulses, and the latter we can fitly describe as secondary impulses.

Among the primordial instinctual impulses I count the primitive expressions

⁵ Alfred Adler had already been struck by the combination of analerotic characteristics with vagotonic.

of the self-preservative instinct (the ego-instinct of Freud) and the sexual impulses. They represent the momentary interests of the individual; that is, on principle they are always directed toward the immediate present satisfaction. As regards the sexual impulses this statement may at first sight appear surprising, for after all the sexual instinct is generally brought into the closest connection with procreation; that is, with a superindividual function directed toward a biological goal, namely, with the preservation of the species even in the remotest future. But after all, this goal, like the goals of the instincts in general, is not, in most cases, present in the human consciousness; and most certainly the animal has no notion of the "aims" of its instinctive action. And even among civilized human beings, who, by intelligent consideration, can under certain circumstances become cognizant of this purposefulness, reasons of utility are never the decisive factor in impulsive actions. For example, no one will assert that as a rule a civilized man performs the sexual act with the conscious intention of procreating the species, or that a professor of physiological chemistry eats his meals in order to supply his organism with the necessary calories.⁶ It is true that we are accustomed to get over this difficulty by saying that Nature has contrived to ensure that her purposes are "invisible to the individual by setting a pleasurable premium on" the performance of the self-preservative and species-preservative instinctive actions; the performance of the instinctive actions, the satisfactions of impulse, are so pleasurable simply in order that by this means—by bribery, as it were—she can more surely achieve her superindividual "purposes" or "goals." As a matter of fact, introspection tells us that the performance of all instinctive activities, and even the mere preparation for instinctive actions, is connected with pleasure. This pleasure appears, on objective consideration or self-observation, as the actual mainspring, the primary factor, without whose agency the actions in question (which are often extremely laborious or painful) would hardly be begun, to say nothing of performed, with the tenacity characteristic of instinctive actions. But it requires no great perspicacity to see that the problem of how the organism is constantly induced to take such pains for the sake of an unconscious, supra-individual "purpose" is not really brought very near to a solution by the introduction of the teleological fiction of the "pleasure premium," but that this fiction is in reality nothing more than a deception: For "Nature" which is here invoked is precisely what the theory was supposed to explain; and this explanation is not effected by introducing the thing to be explained as a *deus ex machina*. We might conceive the term "pleasurable premium" as a sort of allegorical expression of a (hypothetical) biological law, to the effect that only those impulse patterns inherent in a species have a prospect of further development which in addition to their "utility" have the advantage of giving the individual pleasure. But then the pleasure principle which we sought to exclude from the biological way of regarding the operation of the impulses, has been brought in again by the back door; for now it appears as a second, equally valid formative factor, beside the reality principle hitherto

⁶ On the other hand, even a cursory investigation of the various partial sexual impulses tells us that the majority of these impulses are by no means directed toward procreation; indeed, they are very often directly opposed to this purpose (for example, onanism and homosexuality). Their immediate aim is rather, as Freud was the first to emphasize, nothing more than pleasurable satisfaction in an erogenous zone.

represented by the theory of selection. In other words: We have to consider, in addition to natural selection, a "libidinal selection" as a second operative factor of evolution. In support of the role of the pleasure principle as a joint factor of phylogenetic evolution we might cite the basic law of biogenesis which was formulated by Haeckel. And since we have seen that the ontological development of the drives has proceeded entirely under the control and primacy of the pleasure principle, it may indeed be assumed that this primacy has been operative also in their phylogeny. This assumption seems to be supported by certain very interesting observations of E. Wasmann's, relating to the origin of the ants' practice of rearing guests. Among certain species of ants the habit of rearing such guests—namely, a species of beetles of the *Lomechusa* family—has been developed to such excess that it actually threatens the survival of the species—simply and solely because the beetles in question provide the ants with an intoxicating secretion of which they are excessively fond. And here there is a hereditary instinct of hospitality on the side of the ants, for not only the guests, in the course of the evolutionary history of their race, have adapted themselves to their hosts—the ants—but, as Wasmann was able to prove beyond dispute, the ants have also developed signs of a hereditary adaptation to their guests. For example, each species of ant has its own species of guest beetle, and only this species is reared by these ants. Here, then, we have a case of the greatest interest: An instinct which is directly injurious to the species has evolved, exclusively under the primacy of the pleasure principle, in actual opposition to natural selection. This is assuredly a warning that the concept of "purpose" should be excluded on principle from biological arguments, for here it is merely a fiction, which is based on the fact that the human observer, thanks to his individual memory, in connection with the subsequent elaboration of his experience, is able, in his thoughts, to anticipate the biological goals (in the sense of the objective finality discussed on p. 178)—that is, the effects of his actions. But these actions themselves, even in the case of human beings, are not primarily and consciously purposeful, but in the last resort are dependent on the impulses of the unconscious.

In contrast to the primordial impulses, the secondary impulses, in accordance with their objective finality—that is, in accordance with what they lead to—represent the future interests of the ego and the social community. Here we are dealing with extremely complex syntheses (confluent instincts) between the after-effects of the ego-instincts and the sexual instinct—subject to manifold secondary transferences of affect and object, which occur only among socially organized creatures, and are therefore described as "social instincts." In man their "object representatives" are predominantly mnemonic; that is, they are not necessarily—or, later on, are no longer necessarily—present as sensorial excitation complexes. They are the cultural, social, ethical and religious requirements of the "ego-ideal" (Freud). Their emotional representative in the event of collision with the primordial impulses is the conscience; hence von Monakow (to my thinking) has admirably defined the conscience, biologically, as that system which in the event of collision represents "the interests of the future of the individual and the race." Of course, this definition is not quite exhaustive because it does not take into account the pathology of the conscience, as we observe it, for example, in obsessional neurosis.

The person predisposed to develop a subsequent neurosis enters life with the primary disadvantages already mentioned: burdened on the one hand, with a possibly *ab ovo* enhanced lability or insufficiency of his endocrine, vegetative and midbrain apparatus, combined with the diminished resisting power of his neuroglial filter, and on the other hand tainted with an instinctual constitution diverging in many respects from the normal. How do these predispositions operate in the course of life—how do the neuroses develop on them as a basis, and lastly, what are the mechanisms which lead to the emergence of the manifest psychoneurotic symptoms? In order to understand this we must first of all examine more closely the normal instinctual constitution of the human being. This will be the task of our next lecture.

Tenth Lecture

B. THE DEVELOPMENT OF THE INSTINCTUAL LIFE

Ladies and Gentlemen:

Since we have recognized an abnormality in the formation of the innate instinctual constitution as one of the most incentive innate psychobiological factors of an innate or hereditary predisposition to psychoneurotic disorders, it is high time that we considered the normal instinctual constitution of the human species. Our best plan would of course be to follow the historical evolutionary method—that is, to study the gradual evolution of human instinct. Logically, then, we really ought to begin with the history of the race—that is, we ought to ask ourselves how the human instinct gradually took shape during the long ancestral history of *Homo sapiens*; or at least we ought to investigate the instinctual life of the primitive human races. But for obvious reasons we shall do better, for the time being, to renounce this tedious and difficult method, and to restrict ourselves to describing the ontogenetic development of the instinct. On the one hand, the first method would lead us too far afield from our theme—the general theory of the neuroses—and on the other hand we still know next to nothing about the phylogeny of the human instinct. From time to time we shall refer to the little we do know in order to draw parallels which will help us to profounder understanding of certain pathological expressions of the human instinct. The development of the instincts in the child, on the other hand, we can study day by day—under the condition, of course, that we make up our minds to observe it without prejudice, and to see things as they really are. One would have thought that this condition would be a matter of course, but actually it is nothing of the kind; for, as we are well aware, none of the findings of psychoanalytic research has encountered such opposition and prejudice, none has evoked such general and obstinate contradiction, as Freud's discovery that children already have a well-developed sexual life—to mention only

one most essential component of the instinctual life of human beings. And yet precisely this discovery of the psychoanalysts ought to have seemed a matter of course to every biological thinker, since everywhere else in Nature we see that any complicated phenomenon has a long and intricate phylogenetic and ontogenetic pre-history, and does not suddenly, without preliminary stages, spring out of the void!

The causes of this reluctance to see the truth, this resistance to the psychoanalytic assertion that children have a sexual life, are twofold:

Firstly: the amnesia, the profound forgetfulness, that in almost all human beings extends over the first years of childhood and conceals all but a few scanty traces of its events. And yet we know from our parents that in our second or third year we gave evidence of lively psychic impulses, that we expressed various wishes, likes, and dislikes, and indeed, that we made observations which those about us regarded as signs of precocious intelligence, of the beginnings of insight and the powers of judgment—and, of course, quite rightly. Nevertheless, as adults we have practically no recollection of all this. On the other hand, we must none the less assume that the events of our earliest childhood must have left profound traces in our psyche, and that they were determinative for our later development. There can be no question of these memories (engrams) having been somehow extinguished in our brains; they have merely become unconscious—but they continue to operate, through the consequences which they have brought about, right on into our psychic present.

Freud has compared this amnesia of childhood with the amnesia of hysterical patients for the sexual traumata which they have suffered, and from this comparison he draws analogous conclusions. Since the hysterical amnesia is based, as has been shown, on repression—especially on sexual repression—for him the conclusion was obvious that the physiological amnesia of childhood also was based on a kind of “physiological repression,” and above all on the repression of the sexual incidents of childhood. To the obvious objection to this hypothesis, that we no longer know anything to speak of about all the other, inherently indifferent, or at all events less affectively-laden incidents of early childhood, Freud replied that even these different experiences are swept into repression by the repressing

instance. As a matter of fact, such procedures are frequently observed in the pathology of the neuroses; so that even what was originally not proscribed—that is, what did not form a component part of a definite, painful complex—acquires in a secondary manner the significance of the thing proscribed, and is repressed along with it; namely, when by chance contiguity it was associated with the forbidden thing or incident. This “concomitant repression” of intrinsically harmless past experiences is observed most frequently in the phobias. It is as though at a certain point a warning signal were made, meaning: thus far and no farther, for to continue would be disastrous. And this is really what happens. For in accordance with what you learned in a previous lecture of Semon’s law of successive ecphorias, it so happens that the emergence of even a portion may, and even must release the whole engram complex, since the association process, like a train of gunpowder, runs from one engram to another; or like the film in a cinematographic projector, which, once the release has been pressed, is automatically unrolled to the end. Anyone who is anxious not to see a particular scene in this film, because he dreads its reappearance, will do well to avoid the whole film.

Nevertheless, the amnesia of childhood can hardly depend entirely on sexual repression, but in part at least on a functional law—a law of general validity as regards the childish brain. According to this law, the greater part of the engrams received in early childhood sink into the unconscious—as it were, into the organic—but without losing their physiological efficacy (and here it must be admitted that Freud is right). For example, the writing movements painfully learned during our first years at school are continually ecphorized again and again, although we never again become conscious of their mechanism; they have simply become permanently refractory to ecphoria—they are not merely “repressed.” The same thing is true of all secondary automatisms, as Forel has called the acquired habits and dexterities; they are all executed quite unconsciously; indeed, the intervention of the consciousness would only disturb their progress; so that we should be like the Millipede in one of Meyrink’s fables (*The Toad’s Curse*), who was asked one day by his malicious enemy, the Toad, how on earth he knew with which of his thousand feet he had to step off, which foot he had to move next, and which foot

then, etc. The poor Millipede pondered over this problem until he was actually incapable of taking another step.

The extensive secondary "automatization" that occurs in the brain primarily serves to relieve it, so that it is free to receive fresh impressions. But that at least some part of the amnesia of infancy is actually due to repression, and has not simply become incapable of revival, Freud has demonstrated beyond a doubt by the two following facts:

a) It is often possible, in the course of psychoanalytic treatment, by means of the method of free association, to dissolve the amnesia of childhood to a very great extent; that is, to make it regress. That the memories of early childhood experiences which are induced to reappear in this way are not merely fantasies could be objectively proved in a great many cases, inasmuch as the recollections in question were confirmed by the parents of the subject of analysis.

b) The process of "concomitant repression" is also demonstrated, in many cases, in the course of psychoanalysis, by the same method of free association. The conscious memory, as we know, retains, as a rule, the important events and "forgets" the unimportant. But strangely enough, with the scanty fragments of our early childhood memories the very converse is generally true: the most important events—that is, those with the strongest affective coloring—are forgotten, and some quite unimportant detail, some very commonplace incident, is recollected all one's life with the utmost distinctness. On the analysis of such fragmentary recollections, so far as they can be analyzed, it always turns out that the unimportant detail appeared in the consciousness in the place of something important which was repressed. The conscious commonplace remnant thus represents merely a screen memory for the really important affectively charged event which on account of the resistance opposed to it has become refractory to consciousness. Thus, the screen memory, in Freud's sense of the term, to a certain extent represents in the consciousness the whole memory complex; it represents and "screens" the dangerous, affect-laden, proscribed memory, as an innocent-looking shrub might conceal a dangerous mine.

But there is a second reason why the objective observation of certain aspects of childish activities is, as a rule, difficult, especially for the child's parents; this reason is the adult's own resistance. The

"dangerous" (sexual) manifestations of the children's impulses are for the most part entirely overlooked, or if, in spite of everything, they force themselves on the parents' observation, they are minimized as being "harmless," because the accurate observation and interpretation of these manifestations of childish impulses would invariably recall the analogous "failings" of their own childhood, which they are not willing to admit. This process of "scotomizing" (Laforgue, Stekel), this blindness to facts when the facts are displeasing to us, is of course a well-known phenomenon of human psychology, so that we need not be surprised that it should be applied with especial frequency in the sexual sphere.

This explains why the neurologist so often has the following experience: A mother whose child is under treatment for acute psychoneurotic disorders, when cautiously asked whether the troubles had not been preceded by certain sexual incidents, indignantly answers: "Good heavens, no! What are you thinking of, Doctor? My child doesn't do such things!" But now, after these necessary preliminary remarks, we will proceed to describe the development of instincts in the child.

(1) *Infantile Component or Part Instincts*

Birth—the process of being born, or forced through the narrow maternal passage—entails suffering for the matured fetus and constitutes a considerable trauma. This is obvious from the fact that in children who for any reason die shortly after birth we find, with remarkable frequency, signs of injury to the surface of the brain, such as numerous little hemorrhages. These injuries to the brain *intra partum* are doubtless the cause of the profound sleep into which the newborn child commonly falls. This first sleep of the newborn child is thus, in a certain sense, a postcommotional sleep; it may continue for twelve to twenty-four hours.

Freud suggested that birth, the passage of the child through the narrow genital canal of the mother, an ordeal which may continue for hours, is also the first experience of anxiety, and that this "primal anxiety" must be the primal source, and in a sense the prototype, of all subsequent experiences of anxiety. But the cerebral cortex of the newborn child is still, for the greater part, without medullary connections, and therefore, as far as we know, it is still incapable of

functioning; thus it seems improbable that this primal anxiety of the newborn is consciously experienced. Still, it is assumed by many specialists in children's diseases, that the process of birth constitutes the child's "first experience of anxiety." (Cf. F. Stirnimann et al.) Further, it must not be forgotten that the majority of the other mammals come into the world in a much maturer condition than the human child, so that in them a more or less "conscious" experience of birth anxiety probably cannot be excluded *a priori*. Also, according to Freud, it is quite conceivable that the primal anxiety of birth, as the prototype of the general predisposition to anxiety, was inherited by man as a permanent possession from his phylogenetic prehistory.¹ Nevertheless, we must decidedly reject Rank's attempt to make birth anxiety the main factor in the formation of the neuroses, which he described as the "psychic trauma" from which, in the last resort, every neurosis is derived. Rank, of course, was not thinking merely of some sort of "actual-neurotic" anxiety, such as is supposed to be caused by the process of birth itself, but above all of the psychogenic anxiety due to physical separation from the mother, which for the child means the loss of shelter and security in the maternal body—and therefore, the first privation. Nevertheless, this theory has to be rejected, not merely for the reason given—i.e. because the newborn child is not yet capable of an actual psychic experience, since no myelinization has occurred as yet in most of the regions of his cerebrum—but also because it is so excessively improbable that a normal process which all human beings have endured in the same manner should have such pathogenic consequences in the case of a small percentage only.

a) The first stirring of instinct, which the newborn child, after waking from its first sleep, announces by its vigorous cries, is the alimentary impulse. The act of seeking the mother's breast is a highly complicated procedure, which requires the co-operation of a number of mutually associated reflex mechanisms (together with the participation of the musculature of the lips and cheeks, the tongue, the respiratory system, the gums, and the musculature of the esoph-

¹ In support of this theory one may cite the fact that children who have been brought into the world by Caesarean section—and who, accordingly, have not experienced the "birth anxiety"—are by no means immune from anxiety, but are just as subject to it as other children.

agus). And the synergic and successive actions of the suckling do not have to be learned; he sets them in operation, from the very first, in their complete and perfect form. Thus, they are one of the few primary automatisms which are still at the disposal of humanity; that is, they are a genuine instinctive procedure.

b) But very soon the suckling begins to set this automatism in operation even when he is not hungry, and in the absence of his mother's breast he will use his own fingers, and especially his thumbs. The majority of children continue this practice of thumb-sucking into their third and fourth year, and even longer. Lindner, a Viennese pediatrician, called it *Wonnesaugen*, for it obviously no longer serves the purposes of nutrition, but is practiced exclusively because it gives pleasure. Lindner therefore believed that this finger-sucking of the infant was a primitive kind of sexual activity. This is confirmed by the observation that the thumb-sucking, if it does not lead to sleep, very often culminates in a kind of orgasm, as may be recognized from the expression of the suckling, and from other symptoms.

The principal difference between this primitive "sexual activity" of the suckling and the sexual activity of the normal adult resides in the following characteristics:

1. This activity is not directed toward another person, but is centered in the child's own body: it is autoerotic.

2. It is not a genital, but an extra-genital activity, because the satisfaction of the impulse occurs in a different part of the body, namely, the mucous membrane of the mouth. This behaves precisely as though it were the sexual organ; it has become an erogenous zone, and indeed a pregenital erogenous zone; for it is related to the sexual impulse long before those organs which are chiefly concerned in the satisfaction of the sexual impulse have begun to function.

3. This pregenital erogenous zone is based on a vital bodily function; thus, in the beginning the sexual instinct seems to be linked intimately to the instinct of self-preservation by making use of the same source of pleasure, the same zone of satisfaction. We call this coupling of instincts according to Freud confluence of instincts.

The signs of autoerotism, and the restriction of satisfaction to an erogenous zone, which is also linked to one of the vital functions of the instinct of self-preservation, are henceforth the common char-

acteristics of the infantile pleasure instincts. We find these signs in all the rest of the pleasurable activities of early childhood. At this early age the nipples take their place as a further erogenous zone (especially in the girl child), and then the anal region and of course, the genital zone itself. On account of the pleasurable activities of the infant and the very young child, Freud felt that the conception of sexuality must be essentially expanded. He realized that it was obviously incorrect to restrict this conception exclusively to the activity of the sexual organs—or the genital zone—since these constitute only one means of attaining the end of satisfying the pleasurable impulse. On principle, therefore, Freud called any activity "sexual" which does not serve the cause of self-preservation, but which is evidently practiced exclusively to obtain pleasurable sensation from an erogenous zone. This definition of the sexual is biologically consistent in so far as it refers not only to the mature sexual activity of the adult, but also includes the preliminary ontogenetic stages of the sexual impulse, and at the same time appears to be orientated in accordance with the biological meaning of the drive.

c) As soon as the first teeth have appeared the impulse to bite and eat develops in the young child—again in close involvement with, and emerging from, the vital alimentary instinct. Every object that comes within reach of the child's mouth, or that he himself can grasp with his hands, is at once conveyed to the mouth and bitten, chewed, eaten. This oral sadism, as we might call this voracious impulse of the weanling child, appears to be the first, most primitive expression of object libido, in so far as here the impulse no longer finds satisfaction in the child's own body, but is directed upon objects in the outer world. Of course, to a certain extent this eating impulse serves the purpose of a primitive oral orientation, since only by this means does the infant gradually learn to distinguish between edible and inedible objects. Nevertheless, there is something more here than expressions of the instinct of self-preservation—and in particular, of the alimentary instinct—for it is easy to see that the activity of the eating impulse is often quite unconnected with hunger, since it appears even when the appetite has been recently satisfied; further, that in spite of repeated experience, quite unenjoyable, indigestible, and to our taste repulsive objects, such as portions of picture books and toys, bits of wood, lumps of coal, etc. are bitten, chewed, and

even swallowed with the keenest delight. At such times the child makes no distinction between such objects and his own parents, for he eagerly snaps at their fingers and apparently seeks to assimilate them. We may find a phylogenetic parallel to this behavior in cannibalism, as it is still practiced by primitive races. Later on, with the increasing dexterity of the hands and fingers, this primitive sadism of the very young child assumes the form of a predominantly "manual or muscular sadism," which expresses itself mainly in blows, but also in the tearing and destruction of picture books, playthings, and other objects. Later still this manual sadism may enter into the service of infantile sexual exploration.

The sadism of very early childhood appears to undergo a spontaneous repression before the actual period of latency begins, but a little later it is revived in quite a different form. It loses its oral character, while its relation to the rest of the muscular system becomes more and more developed. This subsequent, maturer sadism expresses itself, more especially in later childhood, in the form of a delight in tormenting animals, with a definite sexual coloring. In the prepuberal stage, however, it changes its object again, and is now manifestly related to a sexual partner, that is, to actual genital sexuality, inasmuch as in the boy it is turned directly against girls of the same age, whom he does his utmost to tease and bully, pulling their pigtails, rubbing snow into their faces, etc.

In these forms of childish sadism we are evidently dealing merely with various possible expressions of one and the same basic impulse, which can best be described, in view of its biological significance, as the instinct of aggression.

The instinct of aggression also is originally in the service of the function of self-preservation; on the one hand, the function of food-getting (hunting), and on the other hand, the function of defending oneself against enemies, for, as we know, attack is the best defense. And here again, in a secondary manner, the impulse breaks away from immediate necessity, inasmuch as men may attack, torture, and kill for the sake of the pleasure experienced in doing so.

The passive counterpoise to the instinct of aggression is the pleasurable subjection and surrender to the will of the stronger. This surrender may degenerate into a real delight in being tormented—into masochism, which, when it dominates the vital impulses of sex,

is described as a perversion. It lies in the nature of the reciprocal relations of the sexes that sadistic, aggressive impulses are mingled more especially with the sexuality of the adult male, since the man has to fight for the woman, and has also to overcome her resistance, while the woman's surrender is a precondition of entering into sexual relations. However, it would be quite erroneous on this account to describe the sexual constitution of the male as aggressive and sadistic, and the sexual constitution of the female as passive and masochistic. It is rather the case that both forms of impulse—sadism and its passive counterpart—are intermingled in both sexes; and above all, in both sexes they can suddenly turn into their contrary. The woman too, as a matter of fact, has strongly sadistic leanings, though as far as conflict with the man is in question she often employs more subtle methods. In conflict with rivals women, as we know, can become furies.

While in the conflict of the sexes the coupled impulses of "sado-masochism" are still definitely related to the sexual partner as their object, in neurotic masochism it is, as a rule, no longer possible to recognize such a relation to an external object. Masochism here becomes a form of pure self-torment; its object is the ego of the patient, so that one has the clear impression that it is, fundamentally, simply a sadism "with its point reversed"—a sadism which has turned against the patient's own ego, which is forced to turn against it, because a very strong aggressive impulse could no longer find an outward expression, and is therefore penned up in the ego.

We had to anticipate our present inquiry by this excursion into pathology, because Freud, in a profound and searching study of the subject (*Beyond the Pleasure Principle*) displayed the impulse of aggression and its counterpart, masochism, in an entirely new connection. It was Freud's belief that this group of impulses might represent the expression of a special primal instinct which appeared as the actual counterpart of all the vital impulses, and which he therefore designated the "death instinct" or "instinct of destruction." According to this, masochism also would be a primary impulse, a tendency to self-destruction, a tendency toward death, inherent in every living creature, while sadism, since it aims at injury and destruction in the objective world, would be merely another form of the death instinct. Freud believed that the existence of a death instinct might be derived from the fact that in the last resort all living things revert to the inorganic, in the peace of death: "The goal of all things living is death." And going farther back: "The lifeless was here before the living" (p. 36 l.c.). As against this, the sexual impulses truly represent the "life instinct," which,

subject to an eternal and compulsory repetition, strives to preserve the living through procreation, through the repetition of similar lives in the endless cycle of procreation, birth, growth and further procreation.

Although Freud himself advanced these surprising theories only in an extremely cautious and hypothetical form, expressly adding, in conclusion, that he would always be prepared to withdraw them if new data should make this necessary, the doctrine of the "death instinct" was immediately accepted as a "fact" by Freud's pupils and followers, and exalted to a dogma. Consequently, the whole theory of the instincts—and, of course, the theory of the neuroses—had to be remodelled from the foundation upwards, inasmuch as both were now built up on the conflict between life impulses and death impulses: and henceforth the conflict of impulses, and so, in the last resort, all the incidents of neurosis, had to revolve about this pair of antitheses.

We do not find that the theory of the instincts is notably elucidated by the introduction of the "death instinct." On the contrary, the result of its introduction was a considerable degree of confusion. What, for example, was one to make now of the really primary impulses of self-preservation, such as the satisfaction of hunger and thirst? And what of the cultural and social adaptations, concerning which it had hitherto been assumed that it was they that had come into conflict with the primitive, primal instincts, and had thus conjured up the neurotic conflict of impulse. What was one to think of the enforced interpretation of the "eating impulse"—that because it led to the destruction of other living creatures (be it noted: not of one's own organism!) it should really be counted among the death impulses? (cf. for example the arguments to this effect in Nunberg's *Allgemeine Neurosenlehre*, p. 63). Here, I think, we have a perfectly obvious "*metabasis eis allo Genos*"—an encroachment of thought into a sphere foreign to its proper subject. For it really does not need much perspicacity to see that aggression, which destroys not one's own body, but only alien objects, can have no relation whatsoever to the "death instinct" postulated by Freud, in the sense of a tendency to self-destruction inherent in the organism. Indeed, even the assertion that sadism is "directed toward the destruction of the environment" appears to me very questionable, for biologically speaking the primary impulse of sadism is directed merely toward self-preservation, that is, its tendency is the exact opposite of the alleged "death instinct," and—in its pleasure. As for masochism, this perversion—as Freud himself once demonstrated—can easily be derived from the aggressive impulses—as the turning against the ego of sadistic impulses which have accumulated, being impeded in their outward discharge. Freud's attempt to provide the "death instinct" with a biological basis is also, to my thinking, untenable. Above all, it must be emphasized that hitherto an active striving after (one's own) death has never been discovered in the whole of animate Nature. The gradual "mineralization" of the body, with its consequent increasing failure of vitality, until the final dissolution into the inorganic—that is, until actual death—is rather a purely passive experience, which has to be endured. The organism defends itself to its last breath against this event, but does not in any way contribute to it by active effort; or, where it seems to do so, the actual reality is a state of passive resignation, a coming to terms with death, or a pathological condition of the impulses (asceticism, suicide, etc.), whose derivation from masochism, as the turning of the impulse of aggres-

sion against the ego, is easily recognizable.² In suicide especially, which is cited by the supporters of the "death instinct" hypothesis as the principal evidence of the truth of their contentions, we see this very clearly; for an event which is comparatively so unusual can hardly be regarded as a normal primary instinct affecting all living creatures. In short: In respect of the hypothesis of the death instinct we must agree unreservedly with the criticism advanced by W. Reich (1933). It can hardly be mere chance that after Freud's death yet further voices from his own camp began to be heard in criticism of the doctrine of the death instinct (for example, R. Loewenstein, 1940).

d) Of great importance for the subsequent psychic development are the pleasure stimuli which proceed from the anal zone of the body. They provide the basis of an actual "anal erotism," which is favored by the importance which nurses, etc. attach to the excretory function of the very young child. That here again we actually have an infantile expression of the pleasure impulse which has developed in a secondary manner from the defecation impulse, through confluence or involvement, is indicated by numerous features which are peculiar to this analerotic impulse of the young child. Not only do very many children gradually develop a practice of deliberately retaining the stool, but the stool itself is not infrequently treated by the child as a plaything, and is even assimilated through the mouth; children may go as far as smearing themselves with feces, or eating them. The deliberate withholding of the stool seems originally to be practiced in order that larger fecal masses may accumulate, which naturally have to be expelled by greater pressure, thereby producing a more intensive stimulation of the anal mucosa, and affording a greater sensation of pleasure. Inasmuch as the child then refuses to pass his stools when the "grown-ups" require him to do so, stubbornly insisting that he will set about it when it suits him, on the one hand he manifests the first signs of the familiar childish self-will, which becomes the prototype and in a sense the primitive pattern of all self-will; on the other hand, by such obstinacy the child obtains the opportunity of daubing himself with feces, since he often squats down in his bed instead of on the chamber pot. From all this one derives the impression that the very young child sets an extraordinary valuation on his own stool; indeed, that he conceives it, in a sense, as part of his own body, with which he parts most unwillingly, and

² Significantly enough, in the greatest ascetics of history (e.g. Calvin, Savonarola), the impeded sadism broke out from time to time with terrible destructive force.

that he regards its production as a creative achievement. Many primitive peoples attach the same importance to the discarded products of their own bodies; they carefully collect and conceal them, since otherwise an enemy might get hold of them and place a spell upon them which would have disastrous consequences for the producer. This notion remains quite incomprehensible unless we assume that these savages regard the waste products already separated from their persons, such as feces, urine, hair, nail clippings, etc., as being still parts of their bodies. But since very many animals—above all, the carnivores—make a practice of carefully burying their excrements, the biological intention of this habit may originally have been, on the one hand, to avoid betraying their tracks to their enemies, and on the other hand, to avoid alarming their prey by the discovery of their excrements. Very often, however, the depositions of feces and urine serve just the opposite purpose of warning others of their species—that is, of marking the individual *Lebensraum* (Hediger). Lastly, there is such a thing as anal masturbation, inasmuch as sooner or later the child makes the discovery that by the direct stimulation of the mucosa of the rectum with the finger the corresponding sensations of pleasure can be evoked.

Since the climax of anal erotism occurs more or less simultaneously with, or little later than the period in which the manifestations of infantile sadism are more intensive, it is usual, in psychoanalytic literature, to describe this period of the child's development as the "anal-sadistic stage."

e) The urogenital counterpart of anal erotism is pleasurable enuresis (bed-wetting). This "urethral erotism" is probably derived, to a certain extent, like infantile masturbation, from the interest of the small child in the process of exuresis. Here again we see the confluence or involvement with a vital function of the impulse of self-preservation—in this case the excretory impulse—which is characteristic of all infantile component instincts, in which the same erogenous zone is utilized by the pleasure instinct, which derives in a secondary degree from the instinct of self-preservation.

f) Infantile masturbation makes its first appearance even before the child is weaned, and is generally continued into the fourth year, when it either relapses into latency, under the pressure of strict prohibition and punishment, or is secretly practiced until puberty

—as it is, of course, if the excitation becomes overwhelming as the result of seduction. The masturbation of the suckling is not, of course, systematic; in most cases it is merely episodic; it seems to originate in the chance touching of the genitals, which is inevitable, in view of the child's exploration of its own body. It therefore does not manifestly respond to a primary craving directed toward the genitals. It is, however, connected with a vital function of the instinct of self-preservation—namely, exuresis—being coupled or involved with this excretory function. On the other hand, the masturbation of the second stage of early childhood (until the fourth year) appears with regularity, and is of decisive significance as regards the development of the child's psyche and of his character. Some part of the amnesia of childhood must be connected, as we have seen, with the repression of the masturbatory activities of that period (Freud). The biological mission of this "physiological masturbation" of the very young child consists, obviously, in the preparation for assuring the future primacy of the genital zone over the other, pre-genital erogenous zones. And here it is of special significance that masturbation in the female child is practiced almost exclusively on the clitoris, which organ, as we know, is homologous to the penis. The restriction of pleasurable sensation to the same (or the homologous) erogenic zone as in the male child, particularly if this auto-erotic satisfaction is indulged in persistently, subsequently make it more difficult for the girl, maturing into womanhood, to acquire the normal sexual organization of the adult woman, which should be subject to the primacy of the vagina, the result frequently being frigidity. As we have seen, the repression of infantile masturbation is often incomplete, or sometimes, under the influence of external seduction, it does not occur at all; or under such circumstances it may reappear in later childhood.

g) The later period of infantile sexual activity includes the childish visual curiosity and its passive counterpart, infantile exhibitionism—that is, the pleasurable exposure of the child's own body, not only before other children, but also and especially before adults. The visual curiosity we shall consider more closely in connection with the infantile impulse of sexual exploration. As regards the exhibitionism, it often recurs, in an interesting manner, in the dreams of adults; namely, in the typical dreams of wandering about in a half-

clothed or naked condition. It is interesting to note that the repressed memories of the incidents of early childhood are largely accessible to the dream consciousness, for the same phenomenon of recurrence of infantile sexual excitement in the dream state occurs also in respect of the other part or component drives which we have mentioned.

Much has been said of part or component drives. With Freud, we so describe the impulses of early childhood, because they are not as yet combined and integrated like the sexual instinct of the normal adult, which serves the purpose of union with the sexual partner; because they exist, side by side, as disparate component drives, without any inner connection. Of course, the majority of these infantile part instincts are subsequently absorbed as components in the mature sexual organization—being utilized there in definite connections; others, it is true, prove to be unsuitable even for such use, and are subsequently repressed *in toto*. The essential point is that in the young child, at all events, they have no inner, mutual connection. This phenomenon of the originally unsystematic juxtaposition of individual components of functions is to be observed not only in the sexual development, but also in the ontogenesis of all the rest of the motor functions; for example, the functional components of the actions of standing and walking appear, first of all, only in the form of unregulated though already extremely compound partial reflexes, and only later, under the direction of the cerebral cortex, they combine to form an organized function (Sherrington's "functional integration").

Finally, it is a remarkable fact that the child, under the influence of seduction, can become perverse; for under such circumstances each of these component drives may undergo a one-sided over-development, and may lead to corresponding defects of sexual development. But this would not be possible if the child did not possess a tendency to such perversions in his instinctual constitution; so that in this sense we can say with Freud that the instinctual constitution of the young child is to some extent "polymorphous-perverse."

As a matter of fact, as you will presently hear, the sexual perversions of adults can all be derived from the corresponding component instincts of early childhood, and are thus readily intelligible as instances of arrested psychosexual development, or psychosexual regres-

sions; as a marking time, or a return to earlier infantile stages of the instinctual organization.

Before we close this chapter I should like to warn you expressly against a possible misunderstanding of what I have said concerning the component instincts of early childhood. The meticulous description of the sexual components of the instinctual constitution of early childhood might convey the impression that the young child is exclusively a sexual being, whose psyche is compounded of "lustful" impulses, and nothing more. If by "lustful" impulses you were to understand sexual impulses exclusively, such a conception would of course be sheer nonsense. For in the young child—and especially in the young child!—the component instincts of self-preservation play at least as important a part as in the adult. If special emphasis had to be laid on the sexual impulses, this was simply because we know from experience that these impulses, and their repression, play a decisive part in the subsequent formation of the neuroses. Naturally, therefore, we must pay some attention to them in a lecture on the theory of the neuroses. However, I have repeatedly pointed out that the pleasure impulses are not of the first importance in the psychic development of the young child, but that they can one and all be ontogenetically derived from the component instincts of self-preservation, and that they proceed from an instinctual confluence with the latter. And with this, the cheap reproach of "pan-sexualism" which has constantly been directed against Freud's assertion in respect of infantile sexuality is shown to be baseless.

Eleventh Lecture

(2) The Acquisition of Cultural Inhibitions (Period of Latency)

Ladies and Gentlemen:

About the fifth year, the cultural inhibitions (social and religious, aesthetic and ethical) gradually make themselves felt, the way for their development and acquisition having been prepared slowly, from the first year of the child's life, under the influence of various environmental factors. Through the definitive incorporation of these inhibitions (conditioned inhibitory reflexes in Pavlov's sense) the primitive component instincts of the child are first restrained, and then increasingly transformed and repressed, so that they will no longer be dangerous to the later life of the adult, with its constant requirements of adaptation and mutual consideration. In any case, one has the impression that all the naive operations of the component instincts lapse more or less completely into a state of latency about the fifth year of life. Hence this period of temporary sexual repression is described as "the latency period of childhood."

The childhood period of sexual latency discovered by Freud has recently found confirmation in an interesting anatomical observation. The Dutch anatomist Bolk was able to demonstrate that in human beings, about the fifth year, there is a complete pause, and indeed a certain involution, in the development of the sexual glands, a state of affairs which continues until puberty. Here the usual repressions of the pleasurable impulses of infancy find their morphological correlate; it appears to be conditioned by the histological developments in the sexual glands. In this connection it should be pointed out that something of the same sort takes place in animals, inasmuch as here the sexual glands manifest a tremendous histological development only during the estral period, after which they undergo an extensive atrophy which continues until the next estral period. One might actually say that in the animals the "sense of latency" is repeated periodically even in adult life. At all events, here is a striking analogy.

The temporary repression of the component "drives" takes place mainly under the influence of two powerful educational factors, namely:

1. under the influence of constantly repeated prohibitions, threats

and punishments, and also of the ridicule and disdain to which the sexual activities in question are subjected—and here the older brothers and sisters, if there are such, habitually support the parents, in a manner the reverse of tactful. Infantile masturbation, in particular, is generally combated with threats, the most impressive being the threat that the offending member will become diseased, so that it will have to be cut off. These threats of castration are taken very seriously by the child, and form the basis of the “castration complex” which usually gives some signs of its existence in later life. Not infrequently one result of clumsy and exaggerated threats, uttered in this period of the first development of anxiety, is a disastrous intensification of the almost physiological castration complex, which establishes the predisposition to a subsequent neurosis, manifesting itself in excessive timidity and shyness, exaggerated reaction to the masturbative complex, sexual hypochondria, and all sorts of feelings of inferiority. Yet there are, of course, other factors at work, of which we shall speak presently, and on these it really depends whether the pathological “castration anxiety”—that is, a neurosis—develops from the physiological castration complex.

The anal erotism and urethral erotism of early childhood, infantile exhibitionism, and sexual curiosity, etc., also become subject to repression in the latency period. For obvious reasons in the case of anal erotism this repression is usually final, since of all the infantile component “drives” none appears so uncivilized, and so incapable of assimilation into the later stage of mature sexual organization as the anal component. In its repression the arousing of the sense of disgust plays the principal part—and proves to be one of the most powerful cultural antidotes against primitive erotic activities: i.e., the incessant exclamations of disgust with which adults consistently reprove all such behavior on the part of the child. But the arousing of ambition generally puts an end soon enough to the further activities of this and other component “drives.” Against infantile exhibitionism, on the other hand, the sense of shame will naturally be mobilized, and here, unfortunately, those in charge of the child’s education often overshoot the mark, so that henceforth the child regards nudity as taboo, and is trained in an unwholesome spirit of prudishness, which may prove disastrous to his further development. So, what with threats, punishments, and the arousing of disgust

and shame, simultaneously or successively, for the time being the primitive component instincts of the child are repressed, or, to put it more precisely, enter into a labile stage of latency. At the same time, however, another and if possible a more powerful helper is at work, namely

2. the gradual building up of an ego-ideal in the childish mind, an ideal which derives its attraction and its motive power from the passionate endeavor to become like the parent of the same sex. We have all seen caricatures of this infantile practice of erecting an ideal above the ego: the comical figure of a little boy who puts on his father's hat and coat, tripping over its skirts with his short little legs, while the hat falls over his eyes and blindfolds him. I need not tell you in detail how in the process of education advantage is taken of this childish ambition in suppressing those component instincts which have survived and would hinder the child's cultural development. The repeated admonitions of the teacher: "A big boy (or girl) doesn't do things like that!" all have the effect of reinforcing the ego-ideal in the child's mind. But this process of reinforcement occurs primarily in the child himself, for the admonishing, threatening, condemning voices of his teachers gradually achieve independence as absolute moral commandments, and are taken over from the original speakers—a process which Freud would define as introjection. Inasmuch as the child identifies himself with his mother or father, he assimilates their attitude to life and their moral outlook. Education actually creates nothing new, but merely makes use of a pre-existent impulse pattern, confirming and expanding it.

Thus, as Freud truly says, during the first period of latency the psychic powers are built up, which later on will set obstacles in the way of the sexual instinct, and like dams will restrict its course. In the case of the civilized child we receive the impression that the building of these dams is one of the tasks of education, and certainly education does a great deal in this direction. In reality this development is organically determined and fixed by heredity, and can sometimes occur quite without the help of education. Education remains within its allotted domain when it restricts itself to tracing what is organically designed and impressing the pattern a little more deeply and clearly. (*Drei Abhandlungen zur Sexualtheorie*, third edition, 1915, p. 42.)

You see that in this passage Freud quite clearly conceives the emergence of cultural inhibitions as something already prefigured

in the hereditary instinctual constitution. Since we too have conceived the cultural inhibitions as instinctual in character, and have described them as "secondary drives," we find ourselves in complete agreement with Freud.

(3) *Prepuberty*

While the instinctual life of the child is reaching its highest point—that is, in its third and fourth years—an intensive impulse to explore, to acquire knowledge, begins to manifest itself. The child is no longer content, like the animal, to accept things as they are; he wants to know what things are for, and why they are what they are. The roots of this new and complicated impulse are twofold; in the first place, it springs from the impulse to acquire power over things, and is indeed a refined, one might say a sublimated manifestation of this impulse; the child now takes seizin of his outer world, not only orally and manually, but also intellectually. At first, of course, this sublimation is subject to the requirements of practical utility, thus serving the cause of self-preservation in the wider sense; for through the better understanding of the environment it becomes possible to make better use of it, to submit to the demands of Nature and also to subdue them. Here undoubtedly is an important source—though not the only one—of the cultural progress of humanity. It is certain that the child's desire for knowledge cannot be explained exclusively by his endeavor to adapt himself to reality; a second and no less important source is the eagerness to see; which points to the fact that here too a strong pleasure component is at work. Here once more, as in all the infantile component instincts, we find a confirmation of the rule that practically all the "ego-instincts," which originally serve only the cause of self-preservation, subsequently enter into a confluence with the sexual instinct (in the widest sense): that is, they become secondarily erotized. We see, then, that the child, as soon as the general instinct to know becomes operative, manifests a more or less intensive interest in the genitals of his playmates and his siblings, loses no opportunity of inspecting and touching them, and also, secretly of finding out how this region is fashioned in adults. In short, the "lust of the eye" and the appetite for knowledge manifest themselves to a great extent as "infantile sexual research." Indeed, in many cases one has the impression that the general eager-

ness for knowledge in the young child is first awakened by the sexual problem. This is more especially the case when a little sister or brother is born into the family.

In this case the immediate motives of sexual curiosity are particularly evident. The child—perhaps hitherto an only child—feels that his rights are threatened by the new arrival; he is afraid that the love and care of his parents, which hitherto he alone has enjoyed, will be lost to him, or at all events, that he will have to share them with the newcomer. The latter thus becomes an unwelcome rival, who at first is frankly hated; the child wishes that it could be made to disappear. ("Let the stork take it away again!")

A little example of "brotherly love":

The little A. von E., aged three years and nine months, after a long illness, was sent for a whole year into the Swiss mountains, where he had either his beloved Anny (a family *factotum*) or his "Nana" (mother) all to himself—all the more so in that he needed a great deal of care. When he left home his little sister Li was only a few months old. By the end of the year she was nearly two, and a very strong and active child. When her brother returned she was very friendly and affectionate. The boy, however, was very unhappy in the great country house, for he still wanted to have Anny and his mother to himself. During the first few days he often struck his little sister, saying: "I want to kill her and then pay for her; I can't stand little children!"

Thus, the first question that the child asks himself does not perhaps refer to the difference between the sexes; it is rather "Where do children come from?" If this question is not answered, or if it is answered inadequately—that is, evasively—the child inevitably loses confidence in his parents, or he may even develop a temporary infantile obsessional neurosis, a pathological habit of questioning; the child will incessantly ask the "grown-ups" about him the absurdest questions, thus in a way avenging himself for the fact that no one would answer the one question.

Here is an example of this habit of questioning which I myself observed:

A boy of four and a half years asked: "How do they make carpets? How do they make books? How do they make tapers? How do they make crockery?" And then, suddenly: "Tell me, Daddy, how do they really make people?"

Here we see the real motive of this pathological curiosity suddenly breaking through, and we recognize that all these innumerable and wearisome questions were really only substitute questions, in

which the accumulated irritation due to the failure to answer the primal question, the immemorial "riddle of the Sphinx," suddenly vented itself. In the case of this little boy, since the essential question had not yet been subjected to repression, the many preliminary questions constituted a sort of strategy of fatigue; evidently the father was to be bombarded with questions until at last, for the sake of peace, he would answer the question. At the same time, this circuitous method betrayed the child's dread of a further refusal (anxiety), since he was evidently already aware of the obnoxious character of the question. You will recognize in this example the structure of the pathological brooding or speculation in the obsessional neurosis of adults, in a somewhat schematized and simplified form.

Strange as it may seem at the first glance, the fact that human beings are of two sexes is not at first realized by the child—or at all events, by the male child—not so much because he is unbelieving as because he takes the possession of a penis for granted in the case of all human beings.

This assumption that all human beings have the same genital organs—and those the male organs—is the first portentous error of "infantile sexual theory"; it is maintained by the boy with incredible tenacity, often for many years, and even until the age of puberty, against the evidence of his own senses, being finally abandoned only after severe internal conflict. The reason of this tenacious persistence in the belief that all human beings possess a penis is the assumption that girls are not born without penises, but that they have somehow lost them—they have been cut off; they were cut off as a punishment for the naughty and forbidden act of playing with the member, for which the boy himself has repeatedly been threatened with castration. Suppose that a little boy to whom this threat of castration has already been made happens to see the genitals of a little girl; profoundly startled by the sight, he interprets the reddish cleft of the vulva as a wound or scar,¹ and almost inevitably he is forced to draw the conclusion: "So it is true, after all—then such a thing might happen to me also!" With girls the case is very different: they note the absence of the penis as soon as they

¹ As a matter of fact, in some Swiss dialects the vulva, especially in immature girls, is described as the "scar"—a popular confirmation of the origin of the male castration complex.

have seen one on a boy, and so, at an early age, they begin to envy the possession of a penis. At first they console themselves with the hope: "After all, it will grow." But when, although this hope is unfulfilled, the girl still longs to become a boy, she is bound, on the one hand, to develop feelings of inferiority (especially as adults often allow the girl to become aware of a certain contempt, making her feel that after all a boy is of greater value than a girl); on the other hand, these feelings of inferiority inevitably call for compensation, so that the girl begins to assume an unceremonious and masculine bearing—that is, she plays the part of a boy, repudiating her feminine role, and thus gives evidence of the so-called "female castration complex."

The various infantile theories of procreation and birth are very curious: Children come out through the navel; they are cut out of the body; one has them because one eats some particular food (as in the fairy tale); they grow inside the body (in the stomach) and are born through the anus. The cause of these inevitable errors of infantile sexual research is the child's ignorance of the process of fertilization, and of the existence of the vagina. Even if the child happens to witness or to hear an act of parental intercourse, its true nature is as a rule misunderstood, and is interpreted as the sadistic ill-treatment of the mother by the father. We have already seen that one of the most important motives which may serve as an impetus to infantile sexual research is the dread of losing the affection of the parents through the advent of a new brother or sister. At the same time, it must be admitted that as yet the child does not love in a purely autoerotic manner; it is still capable to a considerable degree of objective love. However, the purpose of this infantile love of the parents is at first purely passive; the child wants above all to be loved; that is, to be cared for by its parents; it loves its parents above all because it needs them; it learns to love, so to speak, from its egoism. And in so far as this love is already sexually colored, its aim is at first merely the passive stimulation and gratification of its own erogenous zones by the mother or father; thus, it is building directly on to the autoerotic phase of the component instinct, but, of course, with the assistance of an object from which the (passive) gratification is expected or solicited. But this does not, in principle, alter the fact that the child's parents and nurses, etc. are its first sexual ob-

jects; at first only objects of passive gratification, they are very soon actively solicited by all the possible means of childish coquetry. And here, at a very early age—and reciprocally, in the relation of the parents to the children—the attractive power of the opposite sex makes itself felt, inasmuch as the boy, as a rule, is more attached to the mother, and the girl to the father.

The little boy's love for his mother, the little girl's love for her father, naturally arouses, also at a very early age, the corresponding feelings of envy and jealousy of the other parent, with whom the child has to share the mother's or father's love. In other words, the parent of the same sex is also the first rival in love. Everyone who has observed the behavior of children in everyday family life can confirm these statements. Jealousy may even go to the length of actually wishing the death of the rival (the father or mother), and in this it does not differ in any respect from the jealousy of adults, except, perhaps, that it is generally more honestly confessed. Such statements as that of the little girl, who said to her ailing mother: "Mama, when you are dead I shall marry Papa!" are by no means rare, and do not even point to a special inhumanity, since a little child has no idea of the meaning of death, but regards it merely as a longer absence than usual, a departure on a journey (hence even in dreams "going on a journey" is generally symbolical of death). But he who dreams that his father is dead, or who as a child has consciously wished that he would die (go on a journey and never return)—he has already killed his father, though only in thought; he must needs feel guilty, like Oedipus, who unknowingly² killed his father and married his mother—guilty, because the unconscious (like early infantile thought) draws no distinction between the mere will to do a thing and the actual accomplishment of the deed. So, in the little child, love, jealousy, and the sense of guilt give rise to the so-called "Oedipus complex" (Freud), whose effects are incalculable in their consequences, not only in the formation of subsequent neuroses, but also in the life of every normal person.

² According to Freud this version is probably a late attenuation of the original; there is much to be said for the theory that in the original form of the legend Oedipus wittingly committed patricide and incest: for otherwise, why was he so terribly punished by the gods?

(4) *The Transformation of the Preenatal Sexual
Organization at Puberty*

We must now briefly consider the tremendous and significant transformations which infantile sexuality undergoes at puberty. We have seen that the earliest phase of infantile "sexuality" consists of a series of co-ordinated component or part "drives," all of which are tied to definite erogenous zones, among which the genital zone is by no means the most important. Even in a later stage its activity is mainly autoerotic, and only in the prepuberal phase does it demand a partner as a sexual object—in the first place, the child's brothers and sisters and playmates (the children's familiar game of "playing at being a doctor"). Such precocious genital manifestations in connection with a sexual partner—even going so far as coitus-like actions—are by no means so rare as they are commonly assumed to be; indeed, one is even inclined, judging from the experience of the neurologists, to regard them rather as the rule. The child satisfies, by means of the only object accessible to it, all that part of its genital sexuality which its parents can never satisfy. Its brothers and sisters and playmates are in a sense substitute objects. However, as we have seen, the child's interest in its genitals is at first very largely commingled with other, purely autoerotic component instincts, and at this stage, at all events, there can as yet be no question of the primacy of the genital zone.

Thus, I learned in the analysis of a twelve-year-old boy that when he was seven or eight years of age he often went into the woods with a playmate, where they used to expose themselves to each other. On one such occasion they discussed the question: which was the more improper, to show one's front or one's behind to another person? They both agreed that the exposure of the posterior was by far the more improper.

It must be added that in the fourth year, as a rule, the entire infantile sexuality undergoes repression, only to manifest itself again from the sixth to the tenth year, at different occasions and in different forms—and now, to some extent, with a genital accent. No doubt, beginnings of a special pleasurable accentuation of the genital zone can be noted even earlier, but it does not as yet attain to primacy. This may be because, on the one hand, the rest of the component "drives" are still too predominant in the prepuberal stage, and on the other hand because the genitals are not yet fitted

for their mature function, for the true sexual act. Further, one has the impression that in all the above-mentioned genital activities of the child sexual excitement still occurs in isolation—that is, it is not yet combined with the corresponding psychic emotions of love. Psychoanalysis therefore describes this early phase or preliminary stage of genital satisfaction as the phallic phase, in order to indicate that in this phase the child is concerned mainly with the phallus as an erogenous zone.

At the age of puberty the internal and external genitals grow and attain their definite dimensions. And hand in hand with their growth begins the intensive production of sexual hormones, resulting in a considerable increase of sexual excitement; at first obscure, indefinite, and objectless, but, none the less, often extremely violent. This as yet objectless sexual excitement results—as you heard in an earlier lecture—in an immediate search for stimuli, and now, correspondingly with the functional preparedness of the sexual organs, an object of their activity is instinctively sought: that is, a sexual partner.

The principal transformations which the infantile sexual constitution has to undergo at puberty are as follows:

1. The various erogenous zones have to become subordinate to the genital zone, so that this now attains primacy over the others;
2. the emergence of an integrated sexual goal in the form of the sexual act of adults, whereby the infantile autoerotism is overcome, inasmuch as the impulse now definitely turns toward a specific sexual object as partner.

The solution of the problem with which the impulse is confronted is often attended by considerable difficulties; that is, the attainment of definitive, normal adult sexuality does not always take place smoothly and without internal conflicts.

To begin with, even the subordination of the component instincts to the primacy of the genital zone is often attended by difficulties. The majority of the component instincts are taken over by the mature sexual organization more or less unchanged; no longer as a final goal but merely in the service of the preliminaries of sexual satisfaction or fore-pleasure. Oral erotism, for example, finds a new application in kissing; the general dermal erotism, in touching and feeling the sexual partner. The masturbatory activity of childhood

is transformed into excitation by contact with the vaginal mucosa; sadism increases the delight of taking possession of the woman; and its counterpart, masochism, increases the woman's pleasure in being taken through the sense of surrender, and even the illusion of violation; sexual curiosity and exhibitionism place themselves at the service of coquetry, which seeks to attract and excite the partner, etc.

Other component "drives," of course, are almost inapplicable to the definitive sexual organization; they are too archaic, and have therefore to be abandoned—that is, repressed. Foremost among these are anal erotism and coprophilia, which still, phylogenetically—that is, in many of the mammals—play a certain part even in the sexuality of the adult animal, inasmuch as they provide a sort of love-token, helping the animal to discover, or announce its presence to, its sexual partner. It is not impossible that the anal erotism and coprophilia of the infant may be the last relics of habits once widely prevalent in the mammalian order, and there serving a vital purpose; that is, they may be a kind of atavism. As a matter of fact, some remnants of anal erotism do pass over into the mature sexual organization; not indeed in their existing form, but displaced upon an adjacent part of the body; and as evidence of the special valuation which was set on the beautiful formation of this part of the body in a woman, even by the mature man, one may cite the fact that the ancient Greeks were not ashamed to describe the Goddess of Love as "*kallipygos*." Among the primitive peoples this part of the body seems often to play an even more important part, for among the women of many African tribes *steatopygia*—the excessive deposition of fat on the buttocks—is the height of fashion.

As we know, the choice of the sexual object is by no means always easily made, for apart from the necessary concentration on the other sex (involving the definitive repression of homosexual urges) it presupposes a preliminary breaking away from the beloved parent—that is, the overcoming of the Oedipus complex, which, in the meantime, has often struck extraordinarily deep roots in the childish psyche. It is probable that the breaking away is never quite complete, so that it is often possible to detect the effects of the Oedipus complex, in its last ramifications, even in normal—that is, non-neurotic—men and women, and this even in their riper years. Very often the choice is unconsciously made of a lover who belongs to the same type as the

mother or the father; the man unconsciously looks for the likeness of the mother in the beloved woman, and the woman seeks the likeness of the loved and venerated father in the man she wishes to love. The choice falls upon the man or woman who resembles the transfigured image (*imago*) of the beloved parent. So even the mature man, in all his later love affairs, often, still unconsciously, seeks the "mother *imago*"—that is, the repressed image of the mother—while in the woman's choice of a lover the "father *imago*" generally is and remains the ruling influence, unless neurotic processes have finally brought about the repression of even this *imago*. Thus, for example, it may happen that in the case of an overwhelming Oedipus complex a neurotic fear of incest may develop, which leads to a positive flight from incest, so that simply on account of this dread of incest the other sex has to be avoided altogether, or (in milder cases) the precise contrary of the *imago*—that is, a blonde woman—may be sought, in the place of the really beloved dark-haired mother *imago*. Yet this belongs to the sphere of the pathological impulses, of the pathological vicissitudes, which we shall consider in the next lecture.

Lastly, let us for a moment consider a question which you will surely have been asking yourselves, and which you must for a long while have been expecting me to answer: namely, the question why it should always be the libidinal, sexual impulses that give rise to neurotic conflicts. One result of this claim of Freud's, as you know, is that psychoanalysis has often been accused of pansexualism. This accusation is, of course, quite unjustified; Freud's opponents forgot, and are still forgetting, a fact of decisive importance: namely, that the basis of the neuroses is a conflict of instinctual impulses, in which the part played by the cultural counter-impulses (secondary impulses) is just as important as the part played by the primitive sexual impulses. For in a conflict, it goes without saying, there are always two opponents. One might just as well have reproached Freud with attributing all the neuroses to the cultural (ethical, social, aesthetic, religious) tendencies; especially as these are at first the more powerful factors, inasmuch as they bring about the repression of the primordial sexual impulses. Nevertheless, we are bound to ask ourselves: Why, of the primordial impulses, are the sexual impulses regarded as almost exclusively responsible for the neurotic conflict—why not the impulses of self-preservation also?

Well, this fact, to which the enemies of psychoanalysis are always taking exception, is perfectly intelligible. Psychoneurotic symptom formation can occur only if the manifestations of one of the two instincts which have come into collision has been repressed. The cathexis of the repressed impulse manifestation must then either seek its discharge in another, inadequate form—for example, in the form of anxiety—or it must attach itself to an originally alien object. Here, then, we speak of a “displacement substitute.” But the claims of the primitive instinct of self-preservation are highly refractory to repression, if only because of their urgency; they are absolutely vital necessities, and therefore they must always be satisfied within a measurable space of time. If one were to go without drinking for days on end, or if one were to expose oneself naked to the cold of winter, such behavior would soon result in death. For the same reason, the self-preservative impulses are not amenable to a lasting displacement of affect, or a conversion; for example, one cannot, with the best will in the world, satisfy hunger in a merely symbolical fashion, or if one is in deadly peril one cannot sit down and eat a dinner as a substitute for an impossible rescue. In consequence of this constant necessity of immediate satisfaction the energy of the self-preservative instincts is always used up, discharged, drawn off in advance, so that no accumulations can occur, at least, while the external conditions of life are at all normal, as is the case in our European civilizations; where, as Bleuler once truly said, the rich can live by cutting coupons, and the poor by appealing to the poor-law guardians. If a catastrophe overtakes a civilized community there may occur, for a time, “neuroses of the self-preservative instincts”—one thinks, for example, of the food riots, and of popular uprisings due to famine, when the afflicted people completely lose their heads, and morality may sink to the most primitive level—even to that of cannibalism. But these neuroses of the instinct of self-preservation have, as you see, a symptomatic character entirely different from that of the true conversion neuroses with which we have to deal in our neurological practice; above all, the conversion and the displacement of affect are absent; for instance, the “drive” of hunger retains its form unaltered, whether quantitatively or qualitatively, and still adheres to its original objective—namely, food; it is not transformed into other bodily symptoms, as is the case with the suppressed sexual urges. These last only, since they are not essential to individual life,

can and must very often suffer retardation, postponement, and repulse by the cultural counter-impulses; indeed, even a definitive rejection, and the repression of their claims. It is only from such postponement and repression that those dangerous accumulations of libido can arise which lead to psychoneurotic symptom formation.

But the self-preservative or ego instincts can of course play their part in the conversion neurosis arising from sexual repression; indeed, it is probable that they always contribute to the symptom formation of this neurosis. For quite apart from the confluence or interpenetration of impulses—that singular kind of symbiosis in which the infantile libidinal component impulses exist together with impulses of self-preservation, the total ego, the individual person, can in a certain sense become a sexual object. This condition may easily arise, even in the mature ego, if the libido, for some reason—for example, on account of a disappointment in love—is withdrawn from the object in the outer world which had hitherto occupied it, or if it has somehow lost its external objects. Psychoanalysis describes this peculiar condition, in which the libido has lost its external objects or has spontaneously abandoned them, turning back to the self, the ego, as its object, as narcissism, after the mythological Greek youth who fell in love with his own reflected image. In so far as scandal or defamation, or continual affronts to one's self-esteem, and other similar encroachments upon the personality, lead to the development of psychoneuroses, we find that the preoccupation of the libido with the ego is mainly responsible. After what has been said it is evident that the pregenital autoerotic component "drives" of the oral and anal stages, etc. are purely narcissistic in their orientation. We therefore speak in this sense of a primary narcissism, and by this we mean the narcissistic libido organization of the infantile stages of the impulses. As against this, in the secondary narcissism of the adult there is regressive re-investment of the ego with the libido, such as occurs more particularly in the case of serious disappointments in love, grief, vexation, humiliation, etc., but also in conditions of serious physical or psychical disease. The most serious regressions of the libido to the early stage of primary narcissism occur, as we know, in the endogenous psychoses, especially in schizophrenia, which explains why it is in this mental malady that we observe the worst relapses into early infantile component instincts, especially in the anal stage (coprophilia etc.).

Twelfth Lecture

C. FAULTY DEVELOPMENT OF THE INSTINCTUAL LIFE

(Normal and Pathological Instinctual Vicissitudes; Infantile Trauma and Acquired Predisposition to Neurosis)

Ladies and Gentlemen:

You heard, in the ninth lecture, that an essential factor of the innate predisposition to psychoneurosis, in so far as there is such a thing, may be sought in a functional-biological determinant of the innate or inherited constitution; namely, in some condition of the instinctual constitution which diverges from normality. It was this realization that led us, in the last two lectures, to give special attention to the normal instinctual constitution of the adult and its development in the child. An "anomaly" of the innate instinctual constitution need not necessarily invoke the whole instinctual life, nor need it be particularly obvious in order to produce far-reaching results; indeed, we know today that a purely quantitative variation in the strength of some component instinct will suffice, whether it takes the form of a constitutional reinforcement or of a diminution. Indeed, it may be assumed as a matter of course that a constitutional reinforcement may very easily take place in the phylo- and ontogenetically old, atavistic, primordial instincts; and thus above all in the early infantile component instincts, because these, by reason of their great phylogenetic antiquity, must be more deeply engraven in the "hereditary memory"; whereas a constitutional instinctual weakness will be more liable to affect the phylo- and ontogenetically recent secondary instincts—and therefore the cultural superstructure. As a matter of fact, it is accepted by many psychiatrists that in certain forms of psychopathy the apparently innate and irresistible tendency to crime—that is, the relapse into an archaic state of human development—is based, not so much on an innate reinforcement of the primitive impulses, as on a constitutional weakness, or even the

complete absence of the moral counter-instinct. Some have spoken in this sense of "moral insanity," which, perhaps, does actually exist in the type of the "born criminal," as Lombroso described him; but in many other cases it is probably merely simulated by secondary factors which we cannot consider more closely at the moment. The application of this quantitative manner of estimating the human types of the so-called "normal" individual, the criminal, the pervert, and the neurotic, and a schematic simplification of the results, would perhaps give us the following balance of forces:

1. With medium strength of the archaic, primitive instincts, and a moderate to vigorous manifestation of the secondary instincts which hold them in equilibrium, we have the so-called normal human being.

2. On the other hand, if the archaic instincts or individual primary impulses are abnormally strong, while the cultural counter-impulses are weak, such an unfavorable mixture would result in either a born criminal or a pervert, depending on which of the various early infantile component instincts is constitutionally intensified.

3. The constitutional intensification of one or several primordial instincts together with strongly pronounced secondary instincts, would finally lead to permanent conflict between these two incompatible constellations, and we should then be confronted with a constitutional neurosis.

In the rest of this lecture we shall give special attention to this last case; we shall ask how this particular instinctual blend would work out in the later life of persons predisposed to neurosis, in accordance with the component or part-instincts which enter into it.

We have seen that the constitutional intensification of a component drive must express itself physiologically in the enhanced excitability of the erogenous zones concerned, and that the most immediate result of the primary over-excitability of such a zone is that the child, in seeking stimuli, should invest the pleasurable sensations proceeding from this zone with an especially powerful emotional valency, preferring them before all others. As a result of such a primary overvaluation there will occur a strong fixation of libido to the impulsive activity in question—a fixation of affect from which the child will subsequently liberate itself only with very great diffi-

culty, but to which it will adhere with the greatest tenacity, at the expense of subsequent cultural acquisitions or superstructures. But before such lasting fixations of libido on early infantile instinctual impulses and activities can occur, corresponding individual experiences are as a rule necessary, which apparently guide the child's libido, as though by chance, in the relevant direction, inasmuch as they first awaken the slumbering predisposition and fill it, as it were, with a positive content—or with corresponding object representatives.

All modern investigators of the neuroses have rightly emphasized the great importance of certain affectively charged experiences of childhood, the so-called infantile traumata, in respect of the subsequent predisposition to neurosis. It is agreed that premature and violent encroachments of a sexual nature, more than anything else, lay the foundation of subsequent neurotic disorders in the childish psyche. Already in the first publications concerning hysteria, Breuer and Freud attributed to the sexual traumata of childhood by far the most important role among the factors predisposing to neurosis. To-day we have become very much more cautious in the etiological valuation of such sexual experiences of childhood, since it appears, in the first place, that many such traumata, as described by hysterical patients in the course of analytic treatment, were never experienced in reality, but only in fantasy, so that to some extent they are merely hysterical fantasies; and secondly, because a very great many people—indeed, nearly all—have at some time or other experienced such sexual traumata in childhood, without developing a neurosis in later life.

The reason why different individuals behave in such different ways in respect of such childish experiences is easily understood: In those individuals who suffered the infantile traumata in question without ill results the primary susceptibility of the innate instinctual constitution was evidently lacking; the experience did not therefore make any very deep impression on them, because it was not, in consequence of a specially orientated instinctual constitution, electively brought into relief, in the search for stimuli, among all others—contemporary and subsequent—experiences, and cathected with an especially strong effect. So you see, it is not *what* we experience that matters so much as *how* we experience it. We really experience in-

tensively only what our instinctual constitution is willing to experience.

We can therefore understand how and why "constitutionally tainted" children become the victims of the sexual traumata of childhood with special ease and frequency; from the beginning, their search for stimuli followed a particular preferred direction: namely, the direction of their constitutionally intensified component "drives." Every criminologist of experience knows that the so-called "seduction of minors" is oftener than might be supposed a seduction of adults also.

The "traumatic" effect of an experience is thus only a special case of the affective election which the innate instinctual constitution is constantly practicing on the world of experience. We therefore come to the surprising conclusion, that perhaps a great part of what used to be conceived as an acquired predisposition to neurosis—and above all the sexual experiences of childhood—is fundamentally no more than the consistent operation of the innate, quantitative intensification of certain components of the instinctual constitution in the individual existence.

At the same time, it cannot be denied that particularly impressive experiences in childhood, even where there is no essential constitutional taint, may create an acquired predisposition to subsequent neurotic disorders; indeed, under certain circumstances they may excite temporary nervous manifestations during childhood itself—that is, actual infantile neuroses. The occurrence of such an acquired predisposition without any essential constitutional taint would be difficult to understand if we did not keep in mind that here the influence of the constitutional intensification of instinctual impulses is replaced by the special intensity of the individual experience in question. There exists between these two factors a sort of inverse proportionality; or, as Freud truly says, the individual experiences, together with the constitutional predisposition, form a complementary series: The stronger the instinctual constitution with which the child was born, the less important the experience needs to be in order to act as a trauma, and conversely: the slighter the innate tendency of the child to resort to the kind of instinctual gratification under consideration, the stronger must be the traumata in order to effect a secondary, acquired libido fixation on the component instinct in

question. You have just heard that in the case of a serious hysterical predisposition the constitutionally intensified instinct does not need the experience of any real trauma; here the merely imagined satisfaction is quite enough to produce the necessary libido fixation. On the other hand, as you have been told, even in people with perfectly sound nerves and with no inherited constitutional weakness, we may observe, some time after a violent psychical trauma, severe though temporary neurotic manifestations, especially hysteriform or phobic (anxiety hysterical) symptoms. This has already been mentioned in respect of the fright hysterias and the traumatic hysterias after shell shock. Among the childhood neuroses we will here mention only the very frequent tic neuroses (blinking, grimacing, pseudo-choreatic twitchings of the limbs or the musculature of the body), together with pavor nocturnus, somnambulism and enuresis nocturna. The psychic mechanisms of these childhood neuroses are essentially the same as in the psychoneuroses of adults; we therefore need not consider them separately here, but will return to our present subject, the operation of the inherited and acquired anomalies of the instinctual constitution.

We have seen that such anomalies lead in early childhood to a fixation of libido on this or that component instinct, which is intensified, constitutionally, or by especially impressive infantile traumata.

We have already indicated that the further consequences of such early infantile fixations of libido may be very different, and indeed, actually antithetical, according to the balance of forces between the primordial and secondary instincts:

1. With moderate strength of the primordial instincts and well-developed inhibitory secondary instincts, the latter, in general, get the upper hand; they become dominant, and there is an extensive repression of the archaic impulses, together with all the object representatives which they may already have acquired from the consciousness.¹ In this case the libido of the early infantile component instincts, deprived of its original goals, must find application else-

¹ A considerable unrepressed remnant of the early infantile component instincts (as you heard in the last lecture) will always find some application—even though this be very restricted—still in its original form, in fore-pleasure.

where. This application elsewhere of the aim-inhibited instinct may occur in different ways, according to circumstances:

a) In the simplest and most frequent case the forbidden impulse changes its sign, so to speak: that is, its sign is replaced by its contrary; pleasure is changed into disinclination, aversion, shame, disgust, indignation, etc. And in this case of reversal into the opposite we have a very definite impression that the impulses of the repressed component instincts are not merely held down with difficulty by purely external compulsion, but that the moral impulses in question are often more strongly accentuated than would be absolutely necessary in order to keep down the repressed impulses. No doubt a certain overcompensation has taken place; it is as though the repressing agency had now seized upon a portion of the motive power, the libido, which had previously informed the repressed impulses, for itself, thus increasing its strength by an accretion of libido. What is happening here is a thoroughly active process, which we describe as "reaction-formation." Such a reaction-formation must play an essential part, for example, in certain exaggerations and aberrations which we may observe only too frequently in the overzealous activities of certain "apostles of morality." It is often impossible to avoid the impression that these people once had the greatest difficulty in mastering their own "sinful" impulses, and that now they have in a sense transferred the battle front from their own inner psyche to the outer world; at the same time, it is quite unmistakable that in this fight against sin, in this constant rummaging about in the devil's kitchen, the original, repressed, prohibited impulses revenge themselves pretty thoroughly; in a word, by this devious means the sins repressed are to a certain extent enjoyed, at least in imagination. And you will realize, from this example, that repression, considered as a whole, is a very queer thing; it is by no means something rigid and unalterable; on the contrary, it is generally an extremely labile condition, and we really cannot wonder if sooner or later, under unusual circumstances—for example, under powerful temptation—we find that the repressed original impulse may suddenly break out of its confinement and appear once more in its immediate and undisguised form. You see, moreover, that there are all sorts of nuances and transitional conditions, from more or less normal overcompensation and reaction-formation to neurosis, so that it is often difficult to say

whether, when a person exhibits certain peculiarities, we are confronted with a still normal reaction-formation, or with a neurotic character.

b) Here is another normal instinctual vicissitude: A harmless substitute for the banned object is sought and found, so that henceforth the impulse can to a certain extent continue to expend itself on this substitute object. It is in this sense that we must interpret, for example, the widespread, pleasurable habit of smoking, when a cigar or cigarette is sucked instead of one's own thumb. That such interpretations occur even to laymen may be seen from the following incident, which occurred in the course of one of my analyses: I myself am a great smoker, and during my analytic sessions I keep on sucking at my cigar. One day one of my female patients commented on my "vice"; she supposed I had to smoke all the time during an analysis lest I should be tempted to kiss my pretty lady patients.

c) In other cases the aim-inhibited libido of the repressed primitive impulses finds yet another and more refined application; it may, in fact, place itself absolutely at the disposal of the repressing instance; under the condition, of course, that it is possible for it to operate in the same manner as hitherto within the framework of the victorious secondary instinct; but now, so to speak, in a "respectable and useful" fashion. The procedure of such an "instinctual transposition" is as follows: in the first place, a change of object is affected; and secondly, the activity is as though canalized by the inhibiting instances and guided into useful paths, while the general direction which the instinct follows remains unaltered. Think, for example, of a person with a strongly sadistic disposition; that is, with pronounced aggressive tendencies. In early boyhood these may often have vented themselves in ways that gave his teachers every cause for anxiety: yet they were finally able to restrain and master them. With the gradual disappearance of these aggressive impulses there developed, in the growing boy, an increasing interest in natural science; his former reprehensible tendency to torment animals was transformed into a keen intellectual interest in zoology and anatomy; he studied medicine and became an eminent surgeon; in which profession his energetic, "aggressive" and intrepid character was of course of great advantage to him. In short you have here one of those de-

velopments of which Freud was thinking when he wrote of the "sublimation" of archaic instinctual impulses.

A further example of such sublimation, but on a more primitive level, is offered by the so-called "anal character" in Freud's sense of the term. The early infantile habit of retaining the stool as long as possible in order to derive more pleasure from its evacuation becomes to some extent prototypical of every later kind of "retention," above all of the retention of money; that is, of parsimony to the point of avarice. On the other hand, the child's tendency to smear himself with feces evokes, as a later reaction-formation, an especially meticulous love of cleanliness and order amounting sometimes even to pedantry, while the early infantile obstinacy, which expresses itself in the child's constant refusal to pass a stool at the request of its elders, becomes a model, as a conditioned reflex, for all subsequent manifestations of obstinacy and perseverance when it is a question of "imposing one's own will." The triad of symptoms—penuriousness, pedantry and obstinacy—can therefore, as you see, very easily be derived from the primitive forms of these characteristics, as expressed in the analerotic activities of the young child. Indeed, one may go even farther, and suggest that an infantile persistence in "squatting" may possibly result in the special disposition of the bookworm and pedant, the dryasdust scholar, who owes his professorship less to his special contributions to science than to his incredibly accurate pedantry and a sort of "squatter's right" to the chair.

2. In aggravated cases—that is, when the libido of individual component "drives," owing to constitutional intensification and the impressive experiences of early childhood, has become overpowering in respect to the weak and faulty structure of the cultural counter-impulses—the repression proves abortive from the outset; for the fixed libido persistently opposes the natural cultural development; it advances the claim that the component instinct, the form of actual hedonic gratification in question, should even henceforth dictate the degree and the direction of the total sexuality; that it should dominate the latter as only the genital sexual instinct, orientated on a definite sexual object, dominates the sexuality of the normal adult. In this way the connection with the mature phase of sexual development does not reveal itself; the satisfaction of the fixated component instinct continues, as before, to be more or less uninhibited, and un-

repressed into reality, and we have what we call a perversity or perversion. We must therefore, with Freud, conceive the various forms of sexual perversion as arrests of psycho-sexual development, which have come about because the perverse individual, on account of an intensive emotional fixation acquired in early childhood, adheres throughout his life to an archaic, early infantile form of sexual gratification. However, such perversions may also come about in a secondary manner, through the subsequent turning back of the libido to early infantile objects and forms of sexual satisfaction; that is, through a process which (with Freud) we describe as regression. Later on we shall have to look more thoroughly into this process and the conditions of its occurrence.

This is not the place for an exhaustive description of the sexual perversions; but we may discuss, briefly, a few general points of view concerning these sexual aberrations, which will enable us later to recognize more clearly, and to understand, certain relations which we shall encounter again in the neuroses.

a) To begin with, a clear distinction should be made between the actual perversions and those sexual aberrations in which the normal sexual aim—union with a sexual partner—is retained; that is, when the component “drives” have subordinated themselves to the primacy of the genital zone, but when the partner, the sexual object, belongs not to the other, but to the same sex. This form of aberration—homosexuality—we no longer regard as among the perversions in the narrow sense of the term, but describe as “inversion”—the reversal of the sexual object. In homosexuality there is merely a defective development of the choice of object—a defective development which only in a small minority of cases is due to an innate inverse predisposition. Such cases are very probably instances of an intersexual constitution, leading to intermediate stages of intersexuality which are attributed to the presence of male and female puberty-glandular tissue. Thus, we should have a “partially feminized male” (or, in the case of a female homosexual, a partially masculinized female), such as Steinach (see Lecture 3) was able to produce experimentally in animals. In such cases, of course, the homosexuality is innate, and—being hormonally conditioned—can not be influenced by psychical treatment. On the other hand, this statement is not true of all those cases—and they form the over-

whelming majority—in which the morphological habitus of the homosexual man is completely masculine, and all his characteristics, and his other inclinations, show purely masculine features; that is, the homosexual does not show the faintest signs of intersexual hermaphroditism, whether somatic or psychosexual. Here, consequently, it must be assumed that the homosexuality was individually acquired at a relatively late stage of early childhood; that it is an acquired homosexuality resulting from special “libidinal vicissitudes.” What these libidinal vicissitudes are which lead to a lasting fixation of the object choice in the homosexual direction can be only briefly mentioned here: It seems, nowadays, to be fairly certainly established that above all the early observation of the absence of the penis in women, if it coincides with an especially vigorous activation of the castration complex, may produce such a shock-effect on the little boy that he is once and for all thoroughly “scared off,” so that henceforth it is quite out of the question that a woman should be an object of sexual desire: for a person in whom this most important part of the body, which is treasured above all, is lacking, is not a proper human being; there is something mysterious and dangerous about her, with which it were better not to meddle. So the possession of a penis becomes the *conditio sine qua non* of any possible love relation—the first and most essential condition of love. Besides and apart from this libido fixation on the “phallic stage” (see Lecture 11) other factors of course play their part in the development of homosexuality, above all an especially aggravated Oedipus complex, so that out of an exaggerated incest anxiety the woman—as a mother image—becomes altogether taboo, and the individual’s entire heterosexuality undergoes repression. Also, a pronounced primary anal erotism may contribute to homosexual fixations. However, this latter relation need not by any means go so far as the so-called “pederasty” in the juristic sense of *coitus per anum*.² In reality it is an exception for a homosexual to be a “pederast.” On the contrary, most homosexuals abhor this vice just as much as normal persons do. The real relation between anal erotism and homosexuality, according to my analytic experience, is rather that of a reaction-formation against a strongly repressed anal erotism; the homosexual abhors the

² Unfortunately modern jurisprudence has used the synonym for the Greek love of boys as a technical term for this filthy vice!

vagina, not only because he is afraid of it, and dreads it as representing the danger of castration to his penis (the notion of the *Vagina dentata*), but also because he identifies it with the anus—that is, he regards it as being as unclean and impure as the latter—an idea which arises from the infantile ignorance of the existence of the vagina.

The passive pederasty of the so-called “pansy” or “nancy-boy” (the male prostitute) would, on the other hand, be more easily intelligible as the direct result of a strong analerotic fixation. But with this we have already overstepped the frontier between the mere sexual inversions and

b) The perversions, in which the sexual aim is aberrant. And this perverse aim always corresponds—as you will have guessed already—with the aim of an early infantile component instinct. After hearing what was said in the tenth lecture concerning these infantile component “drives” you can easily derive these various sexual perversions for yourselves, and you will then of your own knowledge be able to confirm the fact that the sexual perversions or paraphilia, as Stekel has called them, can only be thoroughly understood in the light of Freud’s “sexual theory”: as early infantile libido fixations or as subsequent regressions to early infantile forms of hedonic satisfaction—in a word, as arrests in psycho-sexual development.

3. The third case—that of neurosis—is only to be expected, after what has been said, when a very pronounced constitutional or acquired instinctuality is opposed to equally strong primary and secondary inhibitions—that is, well-developed secondary impulses. The early infantile component instincts in question, intensified constitutionally or by individual experience, can then no longer, as in the perversions, operate simply in their original form—that is, in a manifest fashion; but on the other hand the instinctual aim in question can never be entirely abandoned; and there will always be a danger that the primitive impulses will break through the barriers opposed to them by the cultural counter-impulses. The moral ego reacts against the danger of such instinctual irruptions, at first with anxiety, which will be all the greater in proportion to the danger of such an irruption, and now, in this instinctual conflict, a series of active defense mechanisms are put into operation, which are intended to avert the threatening danger—first and foremost the mechanism of

repression. But here, in contrast to the normal case, this conflict between the prohibited impulses and the cultural instances of the ego-ideal always ends in the same way: the attempted repression is a failure, inasmuch as the sedulously repressed impulse always rises again to the surface in one form or another, although it may be disguised in an unrecognizable masquerade; in other words, a compromise is effected between the two mutually irreconcilable instinctual forces—the uninhabitable primitive impulses and the equally powerful secondary impulses. The symptoms of the psychoneuroses are simply the manifestations in the outer world of this dubious compromise. And they are at the same time the negative of the perversions, inasmuch as in the symptoms the perverse impulses of the early infantile component instinct cannot continue to break through in their original form, but, as we have said, only in a masked and symbolical form.

We have still to follow the instinctual vicissitudes—that is, the vicissitudes of the various forms of the sexual instinct in the individual, on the one hand in normality, and on the other hand in the perversions and in neurosis, in order to see what happens to them under these three different circumstances in the adult. But in such an investigation we should have to run far ahead of what we have discovered so far, and to touch upon questions for which you are as yet insufficiently prepared. I prefer, then, merely to advance a few general points of view, and then to enumerate the various individual instinctual vicissitudes in the form of a tabulated survey. You may then consult this table at need.

Concerning the perversions, in which the early infantile component instincts assert themselves in an unrepressed form, all that is necessary has already been said; so that we need not enter more closely into details.

As regards the vicissitudes of the instincts in normality, you have been told that here we have to distinguish between cases of the unrepressed application of the component instincts in forepleasure, reaction-formation, substitute-formation (displacement) and sublimation.

In neurosis the repressed impulses find expression only in a distorted, displaced, and often symbolical form. The symbolical

satisfaction of the prohibited infantile impulses constitutes— as you have just heard—a part of the secret meaning of the neurotic symptoms. It is for this reason that we had to deal so exhaustively with the normal development of the instinctual life, since only our knowledge of the ontogenetic development will enable us to understand the pathological malformation just as we shall understand a physical malformation only if we are acquainted with the developmental history of the organs concerned; inasmuch as we shall recognize it as a case of developmental inhibition, an arrest on the ladder of embryonal development, which is accompanied, at all events in the majority of cases, by secondary pathological processes, such as reactive alterations of the blood vessels, hemorrhages, etc. *Mutatis mutandis*, we find a precisely analogous state of affairs in the sphere of the defective psychic development of the instinctual life.

Among the psychoneurotic symptoms deserving of special attention are those hysterical manifestations which affect, exclusively and monosymptomatically, one particular organ: the so-called organ neuroses. In so far as the trouble is not merely a matter of actual neurotic reflex processes in the vegetative nervous system, such as were discussed in connection with neurasthenia and anxiety neurosis, but of genuinely hysterical symptoms, closer analysis will always reveal a symbolical nucleus, which, as a remnant of an infantile neurosis in the past, intrudes like a foreign body into the present life of the adult. And this nucleus very often consists of repressed ideational contents which owe their origin to “infantile sexual investigation.”

On the other hand, we can no longer doubt that the incidence and the course of many organic disorders are largely dependent upon unconscious psychic predispositions. For example, in a case of pulmonary tuberculosis, the psychic disposition of the patient is by no means without effect on the progress of the disease; if the patient is energetic, optimistic, hopeful, the primary ravages of tuberculosis are often very quickly healed; but if the patient mopes, and passively resigns himself to his “fate,” and accustoms himself to the idea of a prolonged stay in the sanitarium, the disease, in most cases, will be rapidly aggravated, will become chronic, and never again—or only after years of treatment—will the man recover his normal health and be capable of work. Not only have such psychoanalysts as Groddeck, Jelliffe, Hollos, Ferenczi, Deutsch, Simmel, and others alluded to

these facts: but the unconscious conflict which leads to the "flight into illness" has been treated, psychologically, in a very striking and convincing manner by a number of authors and novelists; above all by Thomas Mann in his novel, *The Magic Mountain*. And recently, von Weizsäcker and M. Boss (in a very readable little book), have adduced convincing proof of the fact that even organic affections are largely influenced by psychic factors.

On the other hand, the organs themselves—strange as this may seem at the first glance—are also subject to primary "psychic" affections. In such cases we speak of an "organ psychosis" (Meng). Above all, many cases of so-called endogenous cachexia prove to be in the last resort of psychogenous origin. This complaint affects only girls at the age of puberty; it is characterized by a complete loss of appetite, and indeed absolute aversion for all food, so that the patients slowly but constantly lose weight, until they are mere skeletons, and finally die of inanition or starvation; unless the affection can be controlled by therapeutic intervention. Further, among the organ psychoses we must include certain cases which are diagnosed as chronic ulcer ventriculi or duodeni, or even as Simmond's Disease (hypophysary cachexia). All the case reports hitherto published have referred to patients who had a history of repeated examination by physicians, and of the failure of all methods of physical treatment, until at last, as the *ultima ratio*, psychotherapy was resorted to. And behold!—what could not be effected by any other means, psychotherapy was able to do: that is, it succeeded in setting a completely decumbent endocrine mechanism going on again, and restoring the pathological organic processes to normality. Impressive clinical histories of this kind, which ended in complete recovery, were published by Mirakind, Oberholzer, and above all by H. Meng. The term "organ psychosis" was chosen by Meng to describe these enigmatic cases, because the psychological structure of the patients did not produce the impression of a neurotic affection, but seemed rather to betray a close relationship to the endogenous psychoses (schizophrenia); except for the fact that in these cases the psychic split does not appear to affect the total ego, but exclusively the partial ego of the digestive system. So, as in the endogenous psychoses the total ego is primarily affected, in the organ psychoses, according to Meng, there are primary disorders of the body-ego (in Schilder's sense of the term), and above all of the

endocrine system and the digestive tract. In reality, the way is prepared for these body-ego disorders in early childhood, but as a rule they first become noticeable at puberty, when the ego, subjected to violent instinctual conflicts, regresses to that infantile stage at which the ego disorder began. In connection with such a regression individual organs or organic systems become disordered, seriously or slightly. Their functional efficiency constantly varies in the closest mutual relation to the changes in the ego, a fact especially evident in the case of endogenous cachexia. The organic disorders might be described as equivalents of the damage suffered by the ego. It is understandable that the organ psychoses generally affect the endocrine system or the digestive tract, for the internal secretion is the biological substratum of the instinctual and affective cathexis of the ego, while the digestive tract is the agent of the earliest hedonic gain. Moreover, in the really endogenous psychoses we always see a regression to the oral and anal stage—that is, to the early infantile body-ego ruled by the digestive tract. While in the organ neuroses the ego is affected only in a secondary manner, and the eventual organic disorders represent merely secondary consequences of the process of repression, in the organ psychoses the organs are the primary subject of the affection. Here the ego alteration is primary; the id is victorious over the ego structure, and therewith over the body—that is, over the organ functions, which as such then undergo repression. These operations are doubtlessly effected by way of the diencephalon, and it is in this that the therapeutic effect of psychoanalytic treatment makes itself felt.

In conclusion, I give you, as promised, the following tabulated survey of the instinctual vicissitudes in normality, in the perversions, and in neurosis:

A. THE PREGENITAL SEXUAL ORGANIZATION

1. *Oral erotism*

a) In normality:

Unrepressed discharge in the fore-pleasure of kissing; substitute satisfaction in normal adults—perhaps to some extent smoking, also the habitual sucking of straws or twigs, chewing gum, chewing tobacco etc.

b) In perversion:

Passive fellatio: combined with genital libido-cathexis: Overcoming of penis-envy by illusory introjection of the penis (assimilation of same

through the mouth) together with the sadistic tendency to bite off the penis, to appropriate it and rob the man of it.

- c) In neurosis:

The most varied hysterical symptoms in the direction of the oral zone (lips, teeth, mouth, oesophagus).

2. *Sadism and masochism*

- a) Normal application in the mature, genital sexual organization:

In the enhancement of fore-pleasure in man and woman, and further in direct aggression in attack and defense.

Substitute gratification (especially in children): Tormenting animals, especially the diversion to another living creature of the death-wish directed against the child's own brothers and sisters or other persons.

Hence "vermin" (which one used to torture and kill) are afterwards in dreams symbolical of brothers and sisters who were—or are—always getting in one's way. Substitute satisfaction also in competition, sports and athletics (muscle erotism). Sublimation in certain callings: for example, in the butcher's trade and the surgeon's profession, in both of which a precondition is a certain dose of instinctual predisposition to sadism. Finally, sublimated aggression in speech and writing.

- b) As a perversion: Sexual satisfaction at the spectacle of the agonies of men and animals, which can go as far as lustful murder.

- c) In neurosis:

in neurosis: Early direction of inhibited sadistic impulses against the ego in the form of pathological masochism. In obsessional neurosis: Obsessive fears respecting the welfare of certain persons (mother, father, brothers and sisters, husband, wife, etc.)—reactive fears behind which the repressed death-wish in respect of these persons is concealed. Obsessional-neurotic reaction-formations against the repressed death-wishes in the form of manifold obsessive (compulsive) activities, based on the magical belief in the "omnipotence of thoughts," which in primitive peoples is still conscious, and which is revived in neurosis, and also in superstition, as an archaic, pre-historical relic, as an atavism. A further reactive formation masochistically turned against the ego is thanatophobia—that is, the fear that one may oneself suffer death as a punishment for the evil thoughts which one has entertained of other people.

3. *Anal erotism*

- a) In normality:

In normality:
In fore-pleasure, only scanty remnants in the form of a displacement of the original valuation of the posterior zone to other adjacent parts of the body. Substitute satisfaction: Taking exciting reading matter to the bathroom—displacement of part of the original pleasure in defecation to “thrilling” intellectual enjoyment, during which the act of defecation itself is suppressed. Some persons have an abnormal liking for enemas.

greatly protracted. Many persons have an abnormal liking for cinema. Substitute formation: Coarse language and swearing (coprolalia) in instinctual confluence with oral aggression. Prohibition may lead to subsequent stammering (Brun).

Sublimation: Building up of so-called "anal character," but also assiduity in one's work.

- b) As a perversion:
Rarely occurring, more frequently as instinctual irruption in psychosis, in catatonic delirium (smearing self with feces).
- c) Neurotic symptoms from repressed anal erotism:
All kinds of intestinal and especially rectal symptoms, such as chronic constipation, attacks of diarrhea, colitis membranacea, pruritus ani etc.

4. *Urethral erotism*

- a) In normal sexuality:
Unutilizable. On the other hand, there are numerous sublimations. In particular, early infantile urethral erotism seems to make an important contribution to subsequent ambition, proceeding from the familiar puerile sport of standing in a row and urinating upwards and outwards, to see "who can go furthest."
- b) As a perversion:
Very infrequent; perhaps as a component in exhibition.
- c) In neurosis:
Bed-wetting as childhood neurosis. In adults various neurotic urethral symptoms.

5. *Infantile masturbation*

- a) Normal application in fore-pleasure:
Transition from masturbatory excitation into normal excitation by the mucous membrane of the vagina (in the woman: by the penis).
- b) As a perversion:
Failure to proceed beyond the "phallic stage" with strong narcissistic accentuation and extreme incapacity as lover, perhaps turning toward homosexuality.
- c) In neurosis:
The various reaction-formations against masturbation, which, especially at puberty, can hardly be described as a "perverse vice," but must rather be regarded as a normal stage of transition to mature sexual development. The reaction-formations occur mainly under the influence of the castration complex.

6. *Scopophilia and Exhibitionism*

- a) Normal applications:
In the fore-pleasure of the mature sexual organization as contemplation and delight in receiving admiration, "Nudism."
Sublimated remnants in women's fashions (décolletage etc.), in art (representation of the nude), in sport and games (swimming, gymnastics etc.).
- b) As a Perversion:
Voyeurs and exhibitionists (it is certain, however, that the activity of the voyeur is partly derived from the Oedipus complex: It is fundamentally the endeavor to overhear and observe the parental intercourse in the neurotic repetition-compulsion).
- c) In neurosis:
The repressed infantile exhibitionism is transformed in the reactive formation into excessive prudishness. Exaggerated scopophilia is punished by weak sight, hysterical restriction of the field of vision, even blindness. Blepharospasm as compromise between desire to see and not being allowed to see.

B. PERIOD OF LATENCY AND PUBERTY

1. *The castration complex*

As a result of tactless and exaggerated threats of punishment to be inflicted on account of masturbation unsuspected consequences may develop later; indeed, in aggravated cases the entire genital libido may be dragged into repression, so that primary psychical impotence arises. This constitutes the nuclear complex of sexual hypochondria, in so far as this—in neurasthenia and anxiety neurosis—is subject to a secondary psychic overgrowth.

2. *The infantile sexual theories*

Find their precipitate in hysterical organic symptoms of all kinds (organ neuroses), especially in the hysterical gastric neuroses, in obsessive ideas—having “an animal inside me” etc. (aftereffects of various infantile theories of pregnancy. Hysterical anxiety, dread of a tumor (cancer) inside one).

3. *The Oedipus complex*

a) Normal consequences:

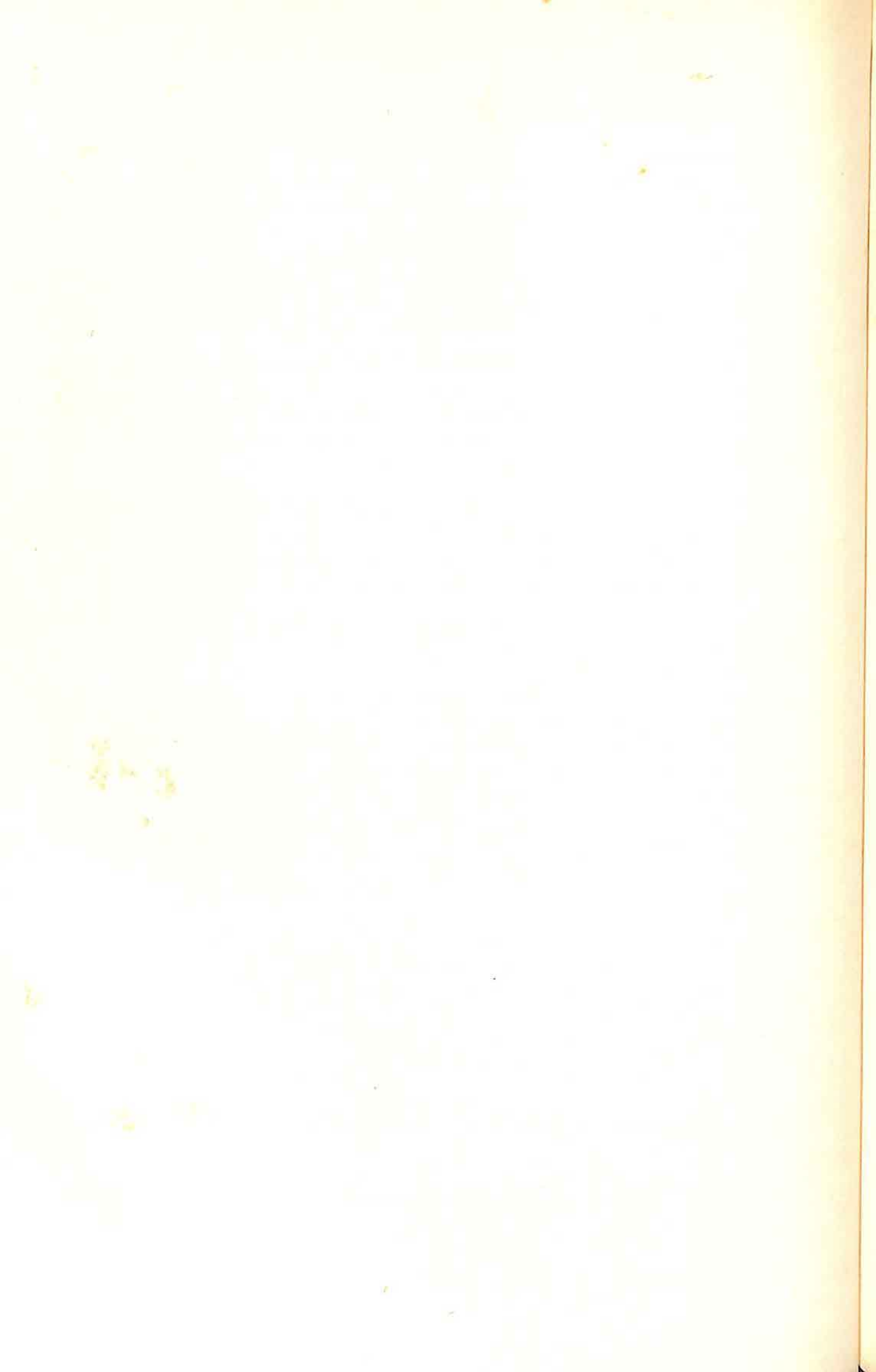
For example, in the choice of a husband or wife, which is very often determined by the imago of the father, the mother, a sister, or a brother. The fixation on the mother may lead to permanent celibacy, or may result in a young man marrying a woman ten to twenty years older than himself.

b) In perversion:

Actual incest or flight into homoeroticism, alarmed by the exaggerated growth of incestual desires.

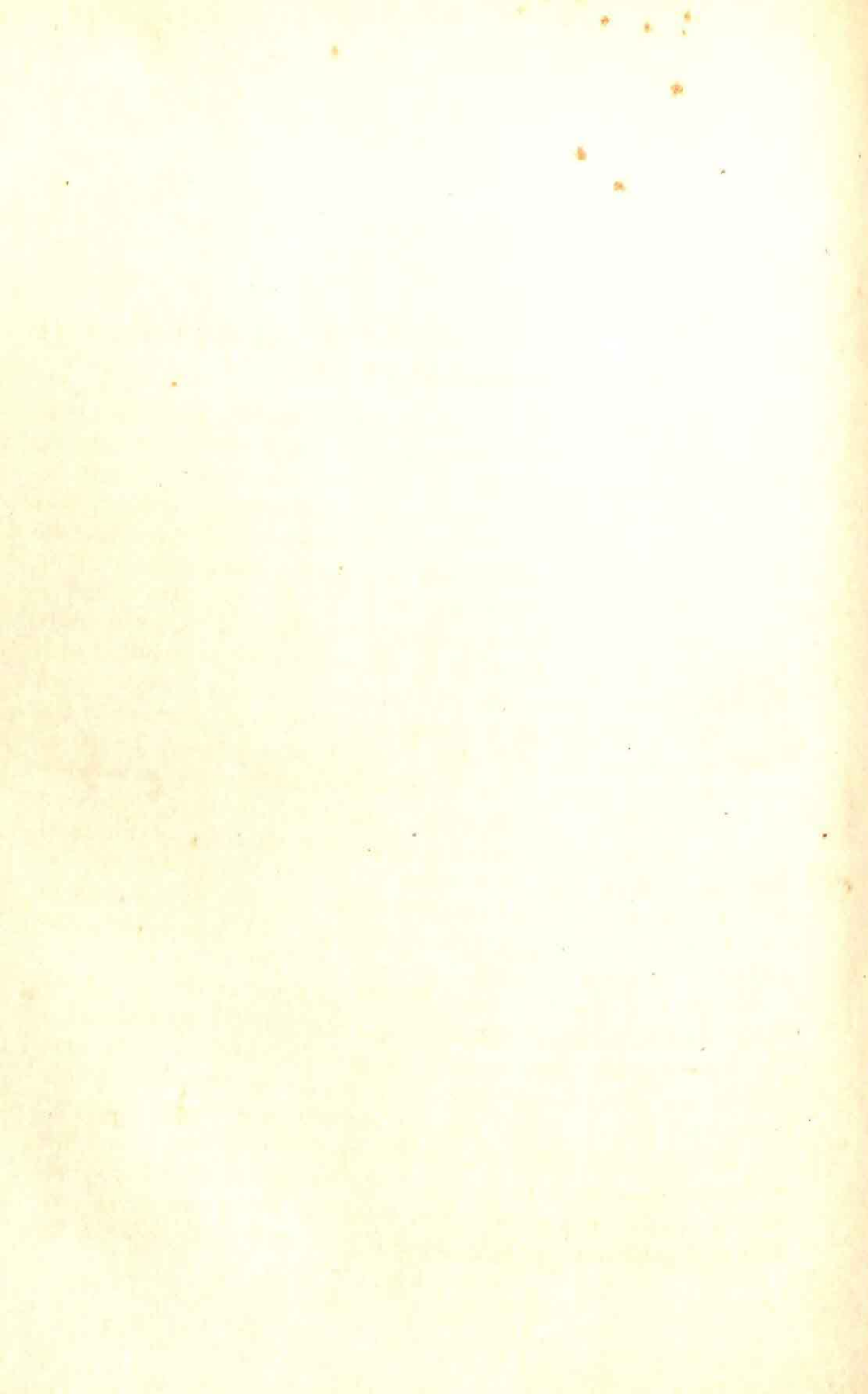
c) In neurosis:

The Oedipus complex has the most lasting, and very often, if not always, the most decisive effect on symptom formation. For example, the obsessive fears are always originally reactions against enhanced incestual desires and at the same time reactions against the patient's unconscious hatred of the parental rival. Identification with this parent often results in the neurotic imitation of the father's or mother's illness, (“I want to be like my father” means “I will be my father” or “I have my father's illness because I wanted to have intercourse with him—he has infected me.”)



PART III

THE MECHANISMS OF SYMPTOM
FORMATION



A. THE INSTINCTUAL CONFLICT

Thirteenth Lecture

Biological Aspect of the Instinctual Conflict

Ladies and Gentlemen:

You will remember that in the last few lectures the assertion was repeatedly made that the psychoneurotic symptoms are simply the manifestations of an instinctual conflict: namely of a collision between phylogenetically ancient, archaic instincts, which we have described as "primordial instincts," or "drives" and the phylogenetically and ontogenetically young cultural and social "secondary instincts" or "drives." If this is correct—and we have every reason to suppose that it is—we should expect to find that the nervous symptoms of the psychoneuroses do not represent a normal result of such a collision, but rather that they are significant of a biologically inadequate elaboration of the instinctual conflict—in short, of an unsuccessful attempt to get rid of it. For greater or small instinctual conflicts are of course taking place in everybody's every-day life, but everybody's biological functions are not essentially disordered thereby; so in the overwhelming majority of cases we somehow manage to deal with these conflicts. In order to understand the mechanisms of symptom formation in the neuroses, we must first of all ask ourselves the general question: How is an instinctual conflict settled in a normal manner?

We shall obtain the answer to this question, as we have always done hitherto, from biology, in the first place; on the one hand, from the experimental psychology of the animals, especially of the ants, and on the other hand, from the experimental physiology of the compound reflexes. Now, you will certainly ask, in astonishment: But what can one learn from the analysis of such simple processes in the lower animals, or even from their reflexes, regarding the infinitely more intricate conditions obtaining in the instinctual conflicts of human beings? Such a possibility seems to be excluded by

the very fact that psychoneuroses, in respect of which we have hitherto studied only the laws of the instinctual conflict, do not occur in animals; or that if something of the kind does appear to occur its manifestations are so impenetrable that the merely objective observation of behavior can lead to nothing. This evidently is attributable to the fact that repression, which is, of course, the necessary precondition of neurotic symptom formation, cannot be demonstrated in the case of the animals. This objection is of course to the point. But although we cannot detect any definite signs of psychoneurosis in animals, we may occasionally observe spontaneous instinctual conflicts; indeed, in respect of the lower animals—the insects, for example—we can even, whenever we desire, provoke instinctual conflicts by actual experiment, and analyze their results most exactly by observing the alterations in their behavior. Moreover, we enjoy one great advantage—that in the case of this animal material, relations are much simpler and therefore far more easily controlled than in human pathology. Moreover, the whole method of experimental ant psychology consists in bringing the normal instincts of the insects into situations of conflict, in order to evoke from them the maximum degree of adaptability of which they are capable. And finally, the ants are especially suitable for our purposes, as objects of research and comparison, because they are social animals, and as such have especially numerous and highly developed instincts, which enable us to note many analogies with the circumstances of instinctual life in human beings. In particular, it is easy, by experimental means, to provoke collisions between the self-preservative and the social instincts, and also between different phylogenetic stages of the latter (Brun, 1926).

But now we will allow the facts to speak for themselves; and first of all we will ask ourselves:

A. *Which instincts generally remain manifest in the case of collisions, and which become recessive, "repressed"?* The following experiments will tell us:

1. Collision between hunger and the social pugnacious instinct: that is, between a primitive stage of the instinct of self-preservation and a primitive stage of the social instincts. Forel once attempted to interrupt a battle which had broken out spontaneously between two communities of wood ant (*Formica rufa*) by spilling some drops of honey in the path of the auxiliary troops, great numbers of which were hastening to the battlefield from the nest which

had been attacked. Ants, as we know, are extremely fond of honey. But in this case most of the insects, coming upon the delicacy as they hurried on their way, stopped only for a few seconds, or not at all, beside the honey; at the most they took a hasty sip and immediately hurried on, to fling themselves into the fray with redoubled fury! Thus, the "hunger drive" of the ants was almost completely suppressed in favor of the previously activated social pugnacious instinct, which for the moment was of greater importance for the preservation of the community.

2. Collision between the pugnacious instinct and the parental instinct—that is, between a more primitive, phylogenetically older and a phylogenetically younger form of manifestation of the social instincts. My brother, Edgar Brun, and I made a number of experiments, always with the following results: if beside a nest of *F. rufa* one empties a bag full of ants of the same species but belonging to a different community, a desperate battle breaks out immediately, which usually ends in the complete annihilation of one of the parties. But if one gives the newcomers a handsome dowry in the shape of brood (larvae or pupae) the fighting is from the outset very much less violent, and it almost invariably concluded, after some fifteen to twenty minutes, with an alliance between the two parties, inasmuch as most of the ants, instead of fighting, eagerly busied themselves with carrying the brood into safety. Without exception this favorable outcome is observed when both parties, in two bags, or together in one bag, are transported to a third spot and there emptied out. Under such circumstances it does not occur to them to fight (although of course, after this experience, as before, they still "cannot stand the smell of one another"), but after the first confusion has passed off they manifest only one desire—to get the brood under shelter as quickly as possible—that is, to save it from the greedy bills of the insect-eating birds. Indeed, under the conditions just described—that is, if one puts both tribes, with plenty of brood, into the same bag, and leaves them there for some time—one can even provoke alliances, under the pressure of necessity, between different species, which otherwise, in nature would fight to the finish.

You will see from these examples, which could be multiplied *ad libitum*, that in such instances of collision no trace of a compromise is to be noted at first between the two incompatible instincts. One of the two conflicting instincts seems to subdue or inhibit the other almost completely. *As a rule the phylo- and ontogenetically older primordial instinct seems to be defeated by the phylogenetically younger secondary instinct, which represents the interests of the species or the social community.* We might actually formulate this rule as a biological law; namely, as the "*law of the primacy of the phylogenetically younger instincts*," since it appears to be universally confirmed throughout biology as a whole.

Greppin, for example, reports that in birds, at other times so timid, the "safety impulse"—that is, a primitive function of the instinct of self-preservation—is always considerably diminished during the courting season, and especially during the period of incubation. We note exactly the same thing in the mam-

mals, up to man himself; often enough, they will fight and even sacrifice their lives in the attempt to satisfy the powerful and urgent sexual instinct, or to save their young from danger, or—in the case of men—for the sake of a social ideal.

As you see, even the sexual instinct—in contrast to what we observe in the neuroses—may prove itself to be prepotent in respect of another instinct; that is, when it is strongly activated, or when, in a state of activation, it collides with a still more archaic instinct—that is, with the primitive instinct of self-preservation. The biological position of an instinct in the hierarchy of instincts and the division of the latter into primary and secondary instincts is therefore relative: Every instinct, with the exception of the most primitive and most complex, may be a primordial instinct at times or play the part of a secondary instinct, according to circumstances; that is, whether it comes into collision with a (biologically) more primitive or more valuable instinct. The uncompromising subordination of one instinct to another is entirely in accordance with a state of affairs which has long been known to physiology as “the law of all or nothing” (Wundt). It is really only a further consequence of this principle.

The cause of this state of affairs, according to which, in the collision of two instincts, the phylogenetically younger instinct is victorious, is still wrapped in obscurity. To us it seems positively paradoxical, when we reflect that the phylogenetically ancient primal instincts are engraven much more deeply in the hereditary memory, so that we should have expected, *a priori*, that they would be victorious in a collision with the more labile secondary instinctual dispositions. The reference to the greater biological usefulness of the secondary instincts in the interest of preserving the species and the social community is inadmissible as a biological elucidation, since the presumption of aims does not furnish a causal explanation, but merely represents a *petitio principii*. On the other hand, it may perhaps be suggested that the phylo- and ontogenetically younger instincts are, as a rule, victorious over the primordial instincts because in consequence of their more abundant associations with recent—that is, embryonically acquired—engrams they are more vividly ecphorized.

We see much the same state of affairs in connection with the reflexes—that is, in the collision of incompatible reflexes. Thus, as we know, the phylo- and ontogenetically ancient Babinski reflex is always, normally (that is, so long as the cerebrum is intact) inhibited by the phylo- and ontogenetically younger cortical plantar reflex. Sherrington, the brilliant British physiologist, has made an exhaustive experimental study of the processes in the collision between incompatible reflexes. The results of his investigations are, in my

opinion, of the greatest importance, as they help us to understand the processes which occur in the higher levels of integration of the instinctual life, since we find in the lower animals all transitional forms from the compound serial reflexes to instinctive actions; and even the latter, in so far as they are hereditarily fixed mechanisms of realization, can readily be conceived as a series of interlocking chain reflexes.

Sherrington's experiments related to the conditions obtaining in a "spinal animal"—that is, an animal (dog or cat) in which the upper part of the spinal cord had been resected. In such animals those portions of the body on the caudal side of the dissection exhibit merely the proper spinal reflexes, since the spinal cord, being liberated from the influence of the cerebrum, is henceforth autonomous. In studying this spinal automatism Sherrington found that of the numerous and often very complicated reflex automatisms which are exhibited by such an autonomous spinal cord, there are some which do not disturb one another (in the case of simultaneous excitation by the stimulation of their reflexogenous zones), but that, on the contrary, a summation or alliance of reflexes takes place. Others, on the other hand, are incompatible and mutually exclusive; and this is always the case if the two reflexes have to employ a common final pathway for their realization. There is then a competition between the two incompatible reflexes for the use of the common pathway. And as a rule (that is, if the stimuli are of moderate strength) that reflex which represents the collective interests of the organism is victorious. The reflex which attains to a higher level of integration, and hence (if the connection between spinal cord and brain be intact) would appear to be colored by stronger affects, wins out over the reflex which has attained only to a lower level of integration, inasmuch as it merely serves the local satisfaction of one reflexogenous zone, and therefore—considered from the standpoint of the total organism—would possess a lower affective potential. Above all, therefore, the nociceptive reflexes—that is, those that serve the purposes of avoidance of pain, or damage to the total organism—are those which prove to be prepotent in collision with relatively more "harmless" reflexes, and inhibit the latter.

An example: In the spinal dog, by scratching or tickling or electrically stimulating a saddle-shaped zone on the rump the so-called scratch reflex of Goltz can

be provoked: that is, the familiar quick, rhythmical, clonic flexions of the hind leg in response to the stimulus of tickling. If now, while the scratch-reflex is in full swing, one stimulates the hind foot on the opposite side by pricking it with a needle, the scratch reflex is immediately inhibited, since the tonic flexion of the crossed hind leg which now occurs—the flight reflex—immediately enforces an extensor reflex in the scratching leg. That is, the alternating locomotory reflex manifests itself, a reflex which signifies merely flight from the stimulus of the prick, which for the moment has become more important than the scratch reflex. The nociceptive flexion reflex therefore asserts itself as prepotent in collision against the less urgent scratch reflex, which might perhaps be compared with the libidinous satisfaction of an erogenous zone—that is, a satisfaction which serves only a segment of the body.

For that matter, we find an analogous state of affairs in the sphere of the vegetative nervous system: You will perhaps remember that in the fourth lecture (p. 69) it was stated, incidentally, that in the event of collision between the sympathetic and the parasympathetic the former—the sympathetic—is always victorious, and for the moment inhibits the parasympathetic reflexes. For example, sexual excitation, which is of course subject to the sacral-autonomous parasympathetic system, is immediately discomfited by an intercurrent, rising excitation of anxiety; that is, radically inhibited. This mechanism, so it seems, constitutes the primary physiological basis of the process which we describe, on the integration-level of instinctual life, as repression.

On the other hand, if the scratch reflex has reached an especially great intensity of excitation, owing to the application of maximal stimuli, it may inhibit a previously provoked stepping reflex, and even the highly nociceptive tonic flexion reflex on the same side. The excitation of the reflexogenous zone of the scratch reflex has in this case reached such a degree of urgency that it can no longer be suppressed even by reflexes of higher levels of integration, but asserts itself victoriously. We see this very plainly in the case of the sexual embracement reflex of the male frog, whose spinal cord is erotized by sexual hormones during the breeding period. This reflex then possesses so high a "spinal potency" that it cannot be inhibited even by highly injurious intercurrent stimuli, such as brushing a hind leg with acid.

We see from this that the phylo- and ontogenetically younger forms of reflex and impulse can be relied upon to retain their primacy over the primordial impulses (or reflexes) only while they have not been liberated with very special urgency; if they are of extreme urgency, if, for example, the organism is in immediate danger of death, even in human beings the secondary instincts are not infrequently defeated; or at all events they find it incomparably more difficult to hold their own against the powerful and urgent claim of the threatened primordial instinct. A typical example of this state of affairs in human psychology is the mass panic on the occasion of a fire in a theater, or a similar catastrophe, when there may easily be a complete collapse of all civilized behavior. In the same way—to

return to reflexology—the sexual instinct of the frog's spinal cord is victorious against the pain and flight instincts (which in this case represent the total interests of the spinal cord and not merely those of a segment).

Thus, the findings of biology are in complete agreement with the general experience of psychoanalysis, according to which even in the neurotic instinctual conflict it is always the primordial sexual instinctual impulses that are first defeated and then repressed by the demands of the cultural secondary impulses. On the other hand, the contrary state of affairs has its parallels in the psychoanalytic doctrine of the instincts: the case in which an instinctual demand, if it has become especially urgent, so that its degree of excitation has become overwhelming, can no longer be thwarted by cultural secondary impulses, but under these circumstances is victorious even against nociceptive excitations of the instincts of self-preservation. You have already heard that under such circumstances the powerful and urgent sexual excitation, disdaining every danger, succeeds in asserting itself, or that if its satisfaction is not possible (for example, in bodily sickness or weakness) a conversion of the excitation into anxiety takes place. Hence the very frequent release of anxiety neurosis during convalescence after serious illness. Even so, the libido, if especially urgent, refuses to subject itself to repression, and to apply itself to another representative, a displacement substitute, but in such cases also undergoes an immediate transformation into anxiety. It is a familiar fact that when we feel desperately ill or are suffering very severe pain we are as a rule indifferent to any intellectual interests. We cannot characterize this process of desublimation better than by quoting the verses of a great German humorist (and pessimist—a man profoundly acquainted with our human weaknesses): namely, Wilhelm Busch's poem on *Toothache* ("Balduin Bählamm," chapter 8):

Subjectively conceived, an aching tooth
Is never welcome: that's the simple truth.
Yet there's a core of good in all things ill;
For he whose tooth is aching does not spill
And waste upon the world his vital powers,
But on one inward point for hours and hours
He broods concentred; let the world go hang!
For hardly have you felt the herald pang,
The too familiar throb, the torturing prick,

The pulsing stab that pierces to the quick,
 And all earth's history may go to pot,
 With stocks and shares, and taxes—let them rot!
 Twice two is three for all you care; in short
 Worthless is all that was of such import;
 The girl you love is probably a minx,
 And if the price of butter soars or sinks
 You care not: for withdrawn into the hole
 In one accursed molar dwells your soul,
 And midst the groans that punctuate each bout
 The resolution ripens: It must out!

Incidentally, it should be noted that these lines contain an incomparably apt description of the process which was mentioned at the conclusion of the eleventh lecture as "the narcissistic withdrawal of the libido from the outer world."

On the other hand, a constant primacy of the primordial instincts becomes the rule only when there is a pathological collapse of the hierarchy of the instinctual life—such as occurs, for example, in progressive paralysis or catatonia, when, as we know, we not infrequently observe the direct—that is, the complete and undisguised—regression of the whole personality to the stage of the unweaned infant.

B. Let us now ask ourselves: *What becomes of the energy (the amounts or quantities of excitation) of the inhibited or suppressed (repressed) reflex or impulse?* Does it disappear, or can it be shown to persist in spite of the inhibition? This question is answered by Sherrington's investigations (which we have just described) into the nature of incompatible reflexes:

We have seen that in the spinal dog the scratch reflex is usually inhibited by the biologically more valuable flight reflex. This inhibition lasts until the flight reflex has discharged itself, but then the scratch reflex reappears spontaneously in the form of an "after-discharge," in which the inhibited excitation, in so far as it was not completely discharged, quantitatively, in respect of its duration and amplitude, reappears and succeeds in discharging itself.¹ The excitation of the inhibited reflex does not therefore die out, but is preserved in undiminished strength; that is, it outlives the inhibition and simply exhausts itself later on. Analogously to what happens in

¹ Minkowski repeated this experiment with a cat, with the same result.

the collision of incompatible instinctual impulses, we could perhaps paraphrase this law by saying that the temporarily inhibited impulse has by no means renounced its satisfaction, but—under compulsion—has merely postponed it until a more convenient time, and will return for it as soon as circumstances permit.

Under primitive conditions of life—for example, in the lower animals—this solution must be the normal settlement of every spontaneous instinctual collision. It is in a sense physiologically prefigured by the normal cyclical rhythm of the emergence and discharge of the various instinctual excitations. In organisms of more primitive "biological scope" the various instinctual forms are ecphorized in precisely predetermined series, in accordance with the "horme" of the species (von Monakow) and the hereditarily fixed, latent "life-programme"—that is, they are ecphorized successively, so that under normal conditions they do not mutually disturb one another by their realization. The whole course of the life of such creatures seems more or less to resemble a moving chain of linked, compound serial reflexes (instinctual actions), strictly determined by heredity. On the other hand, many instincts make their appearance only once in the life of the individual, submerging themselves for ever, after their emergence, in the latency of the hereditary mneme; others, like the instinct of nutrition, repeat themselves periodically (cyclically), possibly alternating in a more or less regular succession with other periodically emerging instinctual excitations. Yet others, like the instinct of self-preservation in its most primitive form, accompany the individual through life as a stable, latent, permanent excitation, or, at least, appear to be always in readiness—always, so to speak, "on guard."

Only on the higher levels of organization, as the biological scope becomes more comprehensive, and as the intervention of the individual memory (the embryonic, acquired mneme) makes it possible, may it happen with increasing frequency that two mutually incompatible instinctual impulses are released simultaneously, and are therefore involved in a collision of interests. Now it can easily come to pass that the secondary object representatives of two incompatible instinctual impulses, which have been obtained from the individual mneme, happen to appear simultaneously. In the same way, a collision will occur if, when an instinct or impulse B makes its appearance, the hereditary-mnemic (hormonally liberated) or individually mnemic excitation of the instinctual stimulus A (corresponding to the memory-picture of the instinct-object acquired through the search for stimuli) has not yet died away. Excitation B then falls into the so-called "acoluthic phase" of instinctual excitation A. That impulse which, in Sherrington's phrase, is "underpotent," will be compelled to linger for a shorter or longer time in the state of inhibition.

C. A further question suggests itself: Under such circumstances, *what becomes of the mnemic excitation or instinctual force of a permanently inhibited, recessive, repressed instinctual impulse?* In answering this question we will, first of all, try to proceed from the simplest conditions—namely, once more, from the collision of incompatible reflexes. If we go through the records of Sherrington's



Fig. 1. "Scratch reflex interrupted by a brief flexion-reflex. The scratch-reflex returns with increased intensity." (From Sherrington, p. 191, Fig. 53 A.)

numerous experiments we come upon many examples in which such conditions as have just been indicated were fulfilled.

In the first of the experiments which we have cited (p. 250) Sherrington discontinued the tickling stimulus of the scratch reflex soon after the intervention of the interfering nociceptive stimulus which liberated the inhibitory flexion reflex and the contralateral extensor reflex. The consequence was, as we have seen, the subsequent discharge of the excitation quantum of the scratching reflex which had not yet discharged itself at the moment of inhibition. In the majority of his other experiments Sherrington allowed the continued operation of the adequate stimulus of the scratch reflex during and after the time of its inhibition by the nociceptive reflex. In this form of experiment (which, as you will hear, corresponds absolutely *in nuce* to the dynamic conditions in the neurotic instinctual conflict) it is to be expected that there would be a damming up of the energy of the continued excitation of the inhibited reflex—an accumulation which is bound to manifest itself somehow, either during inhibition or after the inhibition has ceased. And this is actually what happens. I quote verbatim from Sherrington's records:

Experiment 53 A, p. 191: "Scratch-reflex interrupted by a brief flexion-reflex. The scratch-reflex returns *with increased intensity* [My italics] after the interruption." (Fig. 1).

Experiment 52, p. 190: "The displacement of the stepping-reflex by the scratch-reflex. The scratch-reflex, after a considerable latency, displaces the stepping-reflex. *The crossed stepping-reflex reappears only in modified and imperfect form*, though its stimulus is continued unaltered for some seven seconds after the end of the stimulus for the scratch-reflex." Here we have the remarkable fact that the repressing instance has qualitatively altered the temporarily repressed action,—a striking physiological parallel to what we observe in the repression of human instinctive impulses: Return of the repressed matter, but only in a very modified—i.e. symbolic form.

Experiment 59, p. 211: "'Mark-time' reflex arrested by stimulation of the tail. This arrest is followed, after discontinuance of the inhibitory stimulus, by in-

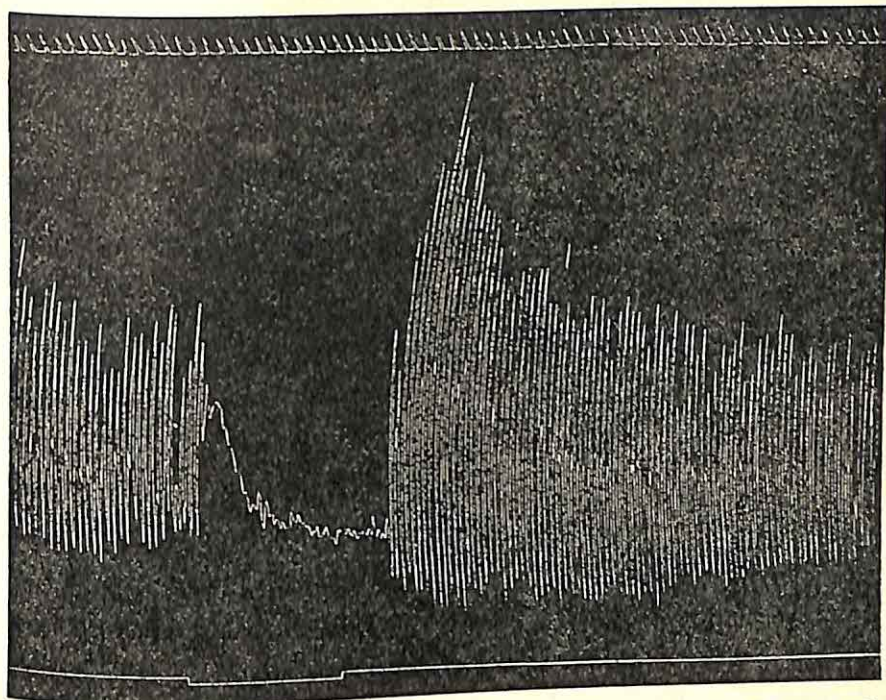


Fig. 2. "Mark-time" reflex arrested by inhibition. This arrest is followed, after the discontinuance of the inhibitory stimulus, by *increased amplitude and some quickening of the leg-movement.* The white line on top indicates time in seconds.

(From Sherrington, p. 210, Fig. 59).

creased amplitude and some quickening of the leg movement." (The "mark-time" reflex is provoked by lifting the hind quarters of the spinal animal—or suspending them—just so far that the feet can no longer touch the ground. The liberating stimulus is the force of gravity; one would say that the animal, by alternating tramping movements of the legs, was trying to regain the missing ground (Fig. 2). [My italics]

Experiment 60, p. 211 (control experiment): The "mark-time" reflex, this time, is arrested simply by removing the exciting stimulus, i.e. the hind legs of the animal are allowed to touch the ground again. "On letting the leg hang again, the reflex starts afresh, but without increase beyond its previous activity" (Fig. 3). (Of course, because this time there was no damming-up of energy!)

Sherrington also describes "compensatory reflexes." One can speak of these "where the reflex is a return to a state of reflex equilibrium which had been disturbed by an intercurrent reflex to which the compensatory reflex is the diametrical antagonist" (Sherrington, p. 204).

Example: If in a dog in the state of decerebrate rigidity the flexion reflex is excited in the one hind leg by intensive stimulation, there is afterwards "an active return to the pre-existing pose. Thus the disturbing stimulus brought

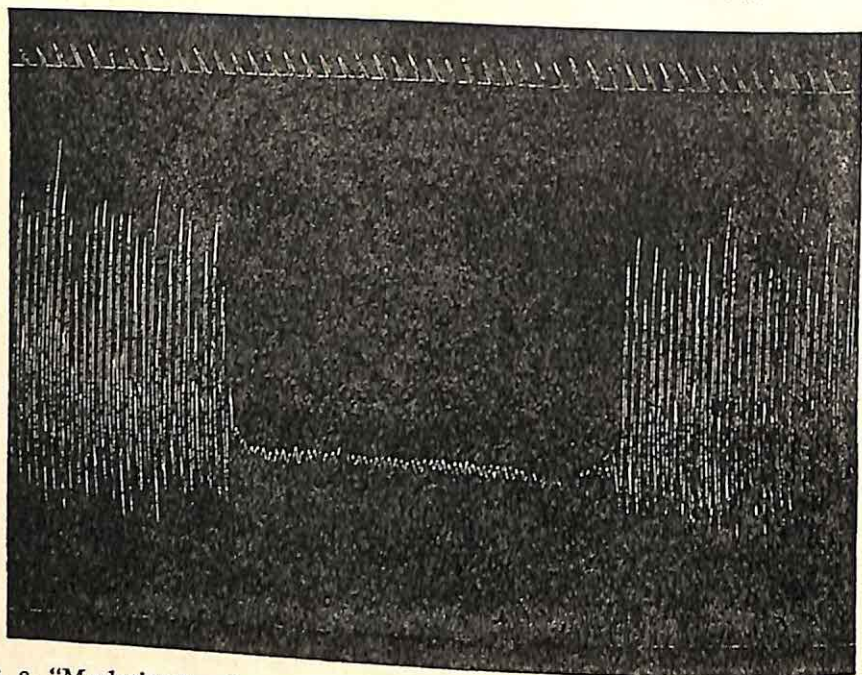


Fig. 3. "Mark-time" reflex arrested by removing the exciting stimulus. As soon as the leg is allowed to hang again, "the reflex starts afresh, but without increase beyond its previous activity." (From Sherrington, p. 211, Fig. 60). The white line on top indicates time in seconds.

about not only the flexion-reflex, but, secondary to that, a reflex antagonistic to that." (p. 205). I think we may see, in these compensatory reflexes, the simplest biological model of what occurs on the highest level, in human neurosis, in the shape of the so-called reaction-formation. For just as the disturbing flexion leads to a compensatory increase of the returning extensor (standing-) reflex, so, in neurosis, and especially in obsessional neurosis, we observe that the emergence of a disturbing, distressing sexual impulse is immediately followed by a reactive overemphasis of the antagonistic moral impulse and an increase of "moral rigidity." It may not merely be by accident that Sherrington discovered his "compensatory reflexes" in animals which were in the state of decerebrate rigidity.

Let us now investigate the economic situation in the inhibition or suppression of instinctual impulses in animals, and especially in insects. The simplest method of experimental frustration of an ecphorized instinctive action in process of realization is to withdraw suddenly the sensory complex stimuli (the object representative of the instinct) with which the instinctual action is concerned—or, to put it briefly, the instinctual object. A situation then arises which is com-

pletely homologous with that of renunciation (or, to be exact, with that of exogenic renunciation). For example, if we deprive a young queen ant, in the act of founding a colony, of her eggs, we observe, invariably, that the insect at first becomes extremely anxious and restless; she runs incessantly about her cage, and is evidently looking everywhere for the lost instinctual object. As we have already indicated, we describe this phenomenon as the "secondary search for stimuli," in contrast to the primary search for stimuli, which occurs after the primary and, at first, still objectless ecphoria of an instinct by hormonal excitation (cf. Lecture 9, p. 186).

Typical examples of such a secondary search for stimuli are: the restlessness of bees, familiar to any beekeeper, when the hive has lost its queen, and the extreme uneasiness which afflicts a worker ant if she is isolated from her comrades in a box for any length of time (Brun).

This anxious restlessness, which manifests itself in a typical manner in all similar cases after the loss of the instinctual object during the realization-phase of an instinct, represents, in my opinion, the analogue of the nervous fit of anxiety, except for the fact that neurotic anxiety is generally evoked by an internal renunciation or refusal. As you heard in the sixth lecture, an entirely similar discharge of anxiety takes place if the satisfaction of the instinct of self-preservation—in the event of sudden, deadly peril—is seen to be questionable (realistic anxiety), or after the sudden irruption of archaic, asocial impulses in spite of the inhibitory secondary instincts (moral anxiety).

The cause of this general unrest after the loss of an object is obvious: The withdrawal of the object affects only the external sources of excitation of the ecphorized instinctual complex; but its internal sources of excitation, the hormonal stimuli and the mnemonic excitations (the hereditary excitations as well as those of the ecphorized individual object engrams, which were already evoked during the instinctual process) continue to operate with undiminished energy! This explains the blind, irresistible urge, inherent in all living creatures, under all circumstances, to continue an instinctual or impulsive action, once begun, until the end pleasure of satisfaction is reached: *Once it has attained to ecphoria, every instinct unconditionally demands satisfaction.*

Therefore, if the adequate object of an instinct which has already

attained to ecphoria is permanently lacking, the satisfaction of the instinct cannot be renounced without more ado; under all circumstances, despite all obstacles, the instinct seeks to achieve its purpose; yet its further progress will now be more or less abnormal; the impulse will be diverted into abnormal paths. Of such anomalies of instinctual behavior after the permanent withdrawal of the adequate object the following typical forms may be observed in insects (after the initial anxious unrest):

1. In the simplest case, when no substitute object can be found, and the secondary search for stimuli has been unsuccessful, the impulse, having been thwarted, simply begins over again—repeats itself: a procedure which we might describe as retrograde instinctual anachronism, or, after Freud, as regression: that is, a falling back, or rather, a retreat or withdrawal to a phase which has already been traversed. And this case seems actually to occur if the withdrawn instinctual object was not primarily in the animal's external environment, but was first created in the course of the realization of the instinct, by the activities of the instinct itself, during its various successive phases, and hence can be recovered (won again) by repetition of the whole chain of actions which previously led to the acquisition of the object.

Example: A silkworm, taken out of its half-finished cocoon, is capable of forthwith spinning itself a new cocoon, inasmuch as it repeats the whole chain of the requisite complicated movements in the same order of succession. In the same way the queen ant—that is, the elderly mother of a tribe, a colony—if she is taken out of the nest and kept in isolation, deprived of all her workers, is capable, under certain circumstances (according to Janet) of regenerating the State unaided, by re-ecphorizing the maternal instincts once actively exercised in founding the colony in the same order of succession. She will therefore give to her newly-laid eggs the attentions which for several years she had left to her workers, and will thus rear for herself a new generation of workers.

Thus, in these cases the withdrawal of the object, the failure to find it, evoked a regression of the instincts to an ontogenetically earlier and already abandoned phase of instinctual activity.

A further, special case of instinctual regression after the withdrawal of the object, which, generally speaking, is more frequently observed only in animals rather low in the biological scale, is the reversion to a phylogenetically older and now obsolete course of behavior, in which case we speak of instinctual atavism.

Thus, in the beehive, following the death of the queen, a number of bees, after the usual period of restlessness, begin to build drone cells and to lay parthenogenetic eggs in them; they become, as the beekeeper says, "drone-blooded." (Only male insects are born of parthenogenetic eggs). Thus, in this case the worker bees behave as did their presocial ancestresses, when there was as yet no differentiation into queen caste and worker caste, but when every female bee was a fully qualified and fully sexed female. Other bees of the "queenless" State regress in their instincts to an even more primitive, presocial phase, inasmuch as they, like their ancestors, give themselves up to an orgy of looting; instead of bringing in honey and attending to the brood already in the comb, they plunder the honeycombs of their own or of other hives. Here then is a complete regression of instinctual life to an asocial phase, so that the impulses now in operation no longer belong to the same instinctual sphere. Similar instinctual atavisms after loss of the object are also observed in the ant community.

The common factor in all these cases is evidently the fact that in the place of the no longer possible progress of the actual, normal instinctive activity a complex of quite different instinctive actions is ecphorized, which on closer investigation proves to belong to an earlier epoch of the tribal history of the insect. The normal instinctive activity thwarted by the loss of the adequate instinctual object is therefore actually abandoned. Yet the energetic charge belonging to this activity, the mnemonic excitation of the inhibited impulse, is by no means lost, but is transferred to another complex of instinctive actions, which, according to the circumstances, may belong to the same instinctual sphere or to another. In either case—in the simple case of regression to an ontogenetically earlier phase of instinctual life as in the case of instinctual atavism—we have a substitute performance. In general terms we might put the matter thus: An instinctual excitation inhibited in its discharge by the loss of its external object—or by internal failure to achieve it—may assert (discharge) itself in the form of a substitute performance by regression to an onto- or phylogenetically older path.

2. A counterpart to instinctual regression is an "*anterograde or anticipatory instinctual anachronism*," as I have called the phenomenon in question. We can speak of such an anachronism only in the rarely observed cases when after the withdrawal of the adequate instinctual object the unrealizable phase of the instinct is simply skipped, and without regard for the end result the next following phase of action is ecphorized. The consequence of such anticipation is generally a more or less complete truncation of the work of the

instinct. The anterograde instinctual anachronism as a rule implies an extensive congelation of the instinctual mechanisms in hereditarily fixed paths, such as are generally observed only in such lower forms of animal life as the insects.

Two examples:

1. I kept a queen of the greater wood ant (*Camponotus ligniperdus*), who had eight eggs with her, in an artificial nest of peat dust. A few days later I placed in the nest a second *Ligniperdus* female with a pupa of the same species. Next day I found that the first queen had killed the second female and had taken the pupa away from her. From this time onwards she attended exclusively to the stolen pupa, neglecting her own eggs and allowing them to perish. By the presence of the pupa the engram of nursing pupae was evidently ecphorized in her brain, and this belongs, in point of time, to the final phase of the colonizing instinct, so that the early phase of attending the eggs and larvae had been skipped—passed over.

2. The mason bee (*Chalicodoma*), a presocial species of bee, builds dainty little individual cells, each of which is provided with an egg after it has been filled with pap, and is then carefully closed with a lid which the bee has constructed immediately before laying her egg. The celebrated entomologist, Fabre, once played a very mean trick on such a mason bee: He destroyed the lower part of a cell which had just been completed and was ready for the egg and the application of the lid,—so that all the bee food ran out through the breach. When the *Chalicodoma* arrived with the completed lid she of course immediately noted the damage inflicted, and became greatly excited. Fabre had expected that she would repair the damaged cell. But she did nothing of the kind; having at last calmed down she clambered up to the rim of the damaged cell, dipped her abdomen into it, and laid her egg, which fell into Fabre's hand, whereupon she crowned her useless labors with the lid, as though nothing had happened! Thus the rigid mechanisms of the confluent chain reflexes continued to operate imperturbably; despite the evidence of the senses, which revealed the injury to the cell, she was not capable of repairing the mutilated work of the instinct, which would have necessitated only a slight regression. At the same time, we cannot say that the insect in question is particularly "stupid," or merely a reflex-machine, and that it was for this reason that it was not capable of the necessary regression; for on the other hand, the mason bee in the matter of spatial orientation, gives unmistakable proofs of a memory which is positively astonishing for so tiny a brain. However, in this case it is probable that the special urgency of the egg-laying stimulus played an essential part; the insect was apparently in such a hurry that it simply had no more time to undertake the necessary repairs. But in other cases this explanation of the anterograde instinctive anachronism cannot be adduced: for example, in the case of the queens of the slave raiding Amazon ants (*Polyergus rufescens*) which remain unfertilized in the nest and begin to behave more and more like workers, even taking part in their slave raiding expeditions instead of laying unfertilized eggs, as one would have expected. Thereby they anticipate the instinctive activities of the caste of workers, who represent a phylogenetically

late development in the ant community, so that here one might really speak of a phylogenetically anterograde anachronism.

Well-defined cases of anterograde instinctive anachronism in human psychopathology have not been observed, unless indeed we should interpret in this sense the phenomenon of denial which is sometimes observed in acute schizophrenic thrusts. In such cases a painful loss of object is simply ignored, the patient behaving in all respects as though the beloved object were still in his or her possession. A young wife who hears that her husband has fallen on the battle field manifests an acute psychotic "denial," simply annulling the fact of her husband's death: she is radiantly happy and cheerful, writes to her husband every day, pretends that she hears daily from him, speaks of his coming leave, asserts that he has just been promoted, etc. In short, she continues to play the part of the happy young wife, overleaping the fact of her objective loss. In short, she behaves just like the mason bee that laid her eggs in the demolished cell, as though nothing had happened.

3. Closely related to this anterograde instinctual anachronism is the following case, which occurs when there is a primary absence of the adequate instinctual object. Under such circumstances the instinctive action may be performed "in the void";² that is, from time to time the appropriate series of instinctual movements will suddenly be carried out, senselessly and aimlessly—in the absence of an object—as though in a theatrical performance.

Thus, as we know, the domesticated carnivora (cats and dogs) generally make the characteristic movements of scraping and burying after defecation, even on a hard asphalt surface, although here it would be quite impossible to bury the excrement. Lorenz noted in birds which had been reared in captivity occasional movements of anger, aggression, or flight, although no "enemy" was present, nor had the captive birds ever yet encountered any enemies.

I owe to the courtesy of the eminent Zürich lepidopterist, Dr. E. Fischer, a very interesting observation of a thwarted instinct "operating in a void," or "running to waste," in an insect: The pupae of a butterfly, *Hoplitis milhauseri* F., lie in cocoons almost as hard as wood. However, at the head end the pupae possess a special appliance whose purpose is undoubtedly to cut through this hard shell. It consists of a spine on the front of the head, projecting between two ridges. With the help of this device, which somewhat resembles a tin-opener, the pupa cuts a circular hole in the hard shell of the cocoon, making a lid which can be thrown back, so that the butterfly can creep out through the hole. Now, Fischer took two pupae of this butterfly out of their cocoons a few days before they were ready to leave them and laid them on the floor of the breeding cage, where they remained quietly for some days. The insects then perforated the shells of their pupae and crept out of them. But now, instead of immediately beginning, like other butterflies, to develop their wings, the insects ran to the wall of the breeding cage, and there, for about an hour, they made incessant thrusting and circling movements with their now quite un-

² German: *Leerlauf*.

armed heads, as though they still had to saw through the non-existent cocoons! While they did this the hinder part of the body was stretched out backwards and propped against the floor. If they were disturbed at their task they resumed their strange behavior the moment they were free to do so. After an hour of this it appeared that the impulse had done enough, and the insects repaired to the roof of the cage in order to develop their wings.

We observe, as in the previous examples, the same interesting phenomenon: We see that an instinctual impulse which, in the absence of a liberating stimulus from without—that is, in the absence of the proper instinctual object—cannot adequately realize itself, nevertheless, in consequence of the existing inner instinctual potential, asserts itself, irrupts into the motor sphere, and runs to waste. Such futile activities have an unmistakable resemblance to certain ceremonial compulsive actions in the obsessional neuroses.

4. More frequently we can observe another mechanism, even in the insects: in the absence of an adequate stimulus complex (instinctual object), a more or less similar substitute object takes its place as a surrogate. We then speak of a substitutive gratification. In contrast to the previously discussed mechanism of substitute performance, in this case the nature and method of the instinctual activity remain the same; there is merely a transference of instinctual energy to another object, a displacement substitute.

For example, after the death of their tribal mother, ants frequently adopt a queen of an alien species as a substitute. Further, cases have repeatedly been described, by myself and others, in which a species of slave-holding ants, in the absence of their usual slaves, if these were not to be found in the neighborhood, would undertake raids upon the nests of quite a different species. Here is another most interesting case of such a displacement substitute: Forel once kept a queen of the greater wood ant (*Camponotus ligniperdus*), who was in the act of founding a new colony, in an artificial nest. After some days he gave the insect pupae of *Lasius fuliginosus*, a very different and much smaller species. For several days the queen attended to these heterogeneous creatures most zealously, as though they had been her own offspring.

The eminent American entomologist W. M. Wheeler refers to a very remarkable example of this kind. It relates to the phylogenetic development of the mating instinct in the male of a certain robber fly (*Empidida*). The male of the genus *Empis* offers the female a captured insect as a wedding gift. This original instinctual object, during the racial history of the predaceous flies, has gradually undergone some curious transformations, inasmuch as it has been replaced, represented by various species of the genus *Hilara*, the marriage gift, the booty left for the female, is surrounded with a delicate froth of dried saliva, which in the case of a third form (*E. aerobatica*) attains to considerable dimensions, becoming a balloon-shaped mass of froth, while the essential part of the present, the captured insect, becomes less and less conspicuous; it is at last represented by a tiny little creature hidden somewhere in the huge, valueless mass of packing. In a fourth stage, represented by *Hilara sartor*, the prey is entirely absent, and

the present consists only of the ball of froth. Even more remarkable is the fact that in other genera the males bring to the females of their choice only a worthless scrap of wood, in which case even the coating of froth is absent, since this apparently originated as a reflex evoked by the appetizing scent of the prey. Thus, in the end phase of the evolution of this curious mating instinct the original instinctual object is finally represented by a surrogate whose relation to the original instinctual object of the ancestors of the genus is very like that of the *symbol* with which the neurotic "satisfies" a repressed instinctual impulse, to the original representative of the repressed desire. It has actually become quite useless as regards any real satisfaction of the bride's appetite. Here we can quite properly speak of a phylogenetic displacement substitute.

All these cases are entirely comparable to the familiar examples of substitute gratification in the instinctual life of human beings, where, for instance, old maids cherish cats or lapdogs with maternal love in the place of the children which have been denied to them. The mechanism of substitution by displacement is especially interesting from the biological standpoint, because it illustrates once more the dysteleological dispensation of Nature. For it need hardly be said that in most of these cases the displacement of the object is absolutely futile from the utilitarian standpoint, since it makes possible only a pseudo-gratification of the instinct, and does not enable the latter to achieve its normal biological purpose.

5. As we know, there occurs in human beings another and essentially more purposeful form of transference of the free energy of permanently inhibited instinctual impulses; a process which was described in the last lecture as sublimation. In sublimation the mnemonic excitation of a repressed impulse surrenders some part or the whole of its liberated energetic charge to the repressing impulse, thus helping to strengthen the latter. Here, then, there is not merely a displacement of affect, but also a change of "signature," a conversion of affect. Pleasure becomes aversion, disgust, hatred, etc. And here, again, we can distinguish between two different subordinate forms:

a) The simple conversion of affect into the contrary; such as occurs in respect of the libido of the repressed pregenital component instincts.

As an example of this process of reaction-formation in the biology of the human instincts, you have already learned something of the instinctual transpositions which result from the repression of a pronounced anal erotism and finally lead to the formation of the so-called "anal character." In insects also we have found a similar mechanism; indeed, it was mentioned at the beginning of this

lecture. You will remember that the ants whose fighting instinct Forel vainly tried to restrain by stimulating their appetite for delicacies, merely sipped the honey in passing and flung themselves into the fray "with redoubled fury." We can now interpret this result: we see that here the energetic charge of the inhibited instinct of nutrition was displaced on to the fighting instinct, which for the moment was more actual and more important, and so helped to reinforce the latter. We have seen a similar process in reflexology. I am referring to Sherrington's compensatory reflexes; as we have seen, where a disturbing stimulus interrupts the diencephalic rigidity of the extremities, it evokes, after the flexion reflex, an active reinforcement of the former reflex of rigid extension.

b) On the highest cultural level, however, a compromise with the repressing instance is often affected. This compromise formation enables the repressed impulses to continue operating in the sphere of the repressing counter-impulse but in a strongly analyzed and restricted form which reveals a definite relationship to the original mode of gratification. In this most favorable—and, biologically, most useful case—we speak of sublimation in the narrower sense of the term.

As a biological parallel of this process, and indeed as a phylogenetically parallel process, one might perhaps adduce the rise of the worker caste among the social insects, in so far as the formation of the worker caste among the ants and bees resulted from the fact that a great proportion of the female insects renounced, permanently and completely, any direct sexual gratification, placing the powerful charges of libido thus disengaged at the service of the social secondary impulses. Thus, the emergence of the worker caste appears to be the most magnificent example of a phylogenetic sublimation of instinct which we have hitherto observed.

Ladies and Gentlemen: In the course of his investigations into the nature of neurosis, its causal conditions, its course, and the remoter consequences of the instinctual conflict Freud adduced three biological standpoints in considering these psychic processes. At first these were regarded with some astonishment, but they proved to be extremely useful; they provided the foundation for a biological theory of the instincts. These three standpoints are the dynamic, the economic, and the topical.

The dynamic standpoint suggests the formulation of a law of psychic energy. It tells us that when a definite instinctual impulse, owing to its incompatibility with the requirements of the secondary impulses, suffers a repression of its instinctual representative, the energy- (libido) cathexis appertaining to it remains undiminished in quantity, so that the amount of excitation appertaining to an in-

instinctual impulse is not affected, but under all circumstances remains constant. Since the path to the original psychic representative is barred, it must either transform itself momentarily into a primal emotion of a qualitatively different structure—most frequently into anxiety—and achieve immediate discharge in this form, or it will simply run to waste, or, finally, the libido of the repressed impulse, if its claim is less urgent, will succeed in attaching itself to another object, which will henceforth be its secondary representative. We have then the case of the displacement substitute. But the absolute amount of excitation will remain quantitatively constant. A quantitative change of libido can be produced only by physiological, hormonal means.

On the other hand, the economic standpoint enables us to understand the special vicissitudes of the quantities of excitation of the repressed instinctual motives; or, more briefly, the instinctual vicissitudes in repression. It therefore elucidates the problem of the special form in which the repressed impulses will manifest themselves.

The third, topical standpoint enables us to consider the further question: Within what psychical system will the processes in question operate? In the waking consciousness, or the preconscious, or the unconscious? This standpoint is outside the province of biology, as it is more specially concerned with the conditions of introspective human psychology.

If Freud's views as to the nature, dynamics, and economy of the neurotic instinctual conflict are correct—that is, if they are something more than ingenious "metapsychological" speculations—they must, theoretically speaking, be subject to confirmation apart from the neuroses—that is, wherever we observe a biological conflict of impulses, whether in human beings or in animals; even if the animals differ from us, in their psychical and physical organization, as completely as do the insects, for example. For neurosis represents only one case—of course, a special and highly complicated case—of instinctual conflict; yet Freud's metapsychological standpoints evidently embrace such general and fundamental problems of the instinctual life that they are valid not only in the psychology of the human instincts, but—if his views are correct—may lay claim to universal biological validity.

And, indeed, this is the case: for, as you have seen, from numerous

examples, precisely the same laws which Freud has found operating in the case of the neurotic instinctual conflict hold good in the animal world, and therefore in the whole sphere of biology, down to the reflexes. We can therefore say, without exaggeration, that the metapsychological points of view which Freud has derived from the psychology of the neuroses are entirely confirmed by biology. In particular, the dynamic and economic principles which Freud has introduced in the psychology of the instincts have attained the dignity of general biological laws which hold good for the instinctual conflict wherever and in whatever form it is observed. For the analysis of experimentally produced instinctual conflicts in animals, even in animals as low in the biological scale as insects, and also the investigation of the processes occurring in the collision of incompatible reflexes, always confirms the surprising fact that even the special economic instinctual vicissitudes suffered by inhibited or repressed impulses can be demonstrated (with the sole exception of conversion) with biological material. Under these circumstances we were able to demonstrate, in the world of insects, all the specific mechanisms of the direct discharge of accumulated libido (in the form of the anxious restlessness of the search for stimuli and the "running to waste"), regression (as onto- and phylogenetic regression or atavism), the displacement substitute (substitute gratification), reaction-formation, and even sublimation!

But the findings of biological research regarding the instinctual conflict are interesting in yet another respect; they compel us to revise our conception of "inhibition." Formerly, there were those who were inclined to believe that a dynamic impulse, once defeated by inhibition, is henceforth excluded from any further participation in the total dynamic field; but henceforth we had to convince ourselves that this is by no means the case. At all events, all the examples adduced show that there is no inhibition of instinctual energy as such; but that a sort of compromise is always formed between the two incompatible instinctual impulses—a compromise, in so far as the repressing impulse must nevertheless permit the suppressed, inhibited, repressed impulse to operate dynamically in one way or another, even though it should act upon useless objects, in biologically futile and rudimentary ways, or in a form quite inconsistent with its original aim. In other words: The inhibition affects either

the aim only of the impulse, or its object, or its original course or instinctual process, but never the impulse in itself.

Evidently, then, it depends entirely on the manner in which this compromise manifests itself, and on its biological operation, whether we should describe it as a "normal" or as a pathological process. For example, no one would think of describing as "pathological" such a harmless acceptance of a surrogate as petting cats instead of rearing children, or such a successful and socially valuable instinctual sublimation as the conversion of sadistic impulses in the beneficent vocation of the surgeon. Whereas, with regard to the majority of regressions, and even more in respect of the conversion and discharge of libido in the form of anxiety, we do not for a moment doubt that these are pathological because biologically injurious forms of compromise-formation.

Pathological compromises between inhibiting and aim-inhibited impulses may therefore be recognized principally by their harmful action. Their real sphere is that of psychoneurosis, in which there is always a pathological compromise formation, inasmuch as the compromises—that is, the modified dynamic processes into which the object-inhibited or aim-inhibited instinctual impulses must enter—always intrude into and somehow disorder the course of the still dominant social and cultural activities, instead of remaining harmless and indifferent where they are concerned, or even supporting them, as in sublimation. Pathological instinctual compromise is therefore recognized by the fact that the inhibited impulse now in its turn retroactively paralyzes and inhibits the higher cultural instinctual activities, and so, as it were, revenges itself upon them for the suppression which it has suffered. The end result in this case is not, as in the "normal"—or better still, the ideal—solution of instinctual conflicts, a reinforcement of the inhibiting impulse, but, on the contrary, both impulses suffer a more or less equal diminution of their free energy, inasmuch as they consume themselves mutually in fruitless opposition.

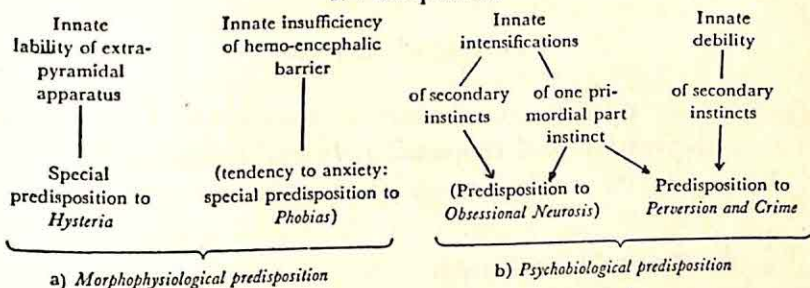
So we arrive at the surprising result that actually the "inhibition" affects not only the repressed sexual primordial impulse, but that it has precisely the same effect on the cultural secondary impulses which at first appeared to have been victorious. That this is so you

will realize immediately if you closely observe any person of whom it is said that he "is inhibited" or "suffers from inhibitions." He behaves awkwardly and with constraint in society; for example, at a decisive moment he misses his footing on the stairs, or upsets a full wineglass by a clumsy movement; he doesn't know what to say to the girl he adores, indeed, he does not dare to approach her; if in a public meeting he has to make an important communication he blushes and begins to stammer; if he is an actor or a singer he finds himself overcome by stage fright and compelled to cancel his performance at the last moment; in short, in the fulfilment of all his social and cultural functions he is more or less embarrassed and inhibited. This state of inhibition in his free motor sphere is due to those faulty attempts to resolve the instinctual conflict which are typical of the psychoneuroses; in the last resort it is due, as you will presently see, to the fact that the repression is actually always unsuccessful, inasmuch as the repressed instinctual impulses are constantly breaking loose—but in the form of neurotic symptoms—and constantly hindering, inhibiting, or even paralyzing the normal course of the cultural instinctual activities by their intervention.

But I feel that in the last few lectures, in which we had to consider the theoretical explanation and derivation of some extremely complicated pathobiological processes, I may have been making excessive demands upon your faculties of comprehension. In order to make it a little easier for you to follow the thread of my argument, I have summarized the processes described in a chart to which you may always refer at need.

INSTINCTUAL VICISSITUDES

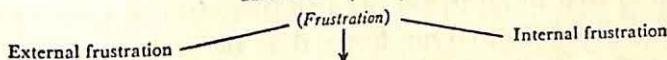
I. Predisposition



1. Innate (hereditary, constitutional) predisposition (internal vicissitude)
2. Acquired predisposition: Complementary series (external vicissitude)

II. Fixation

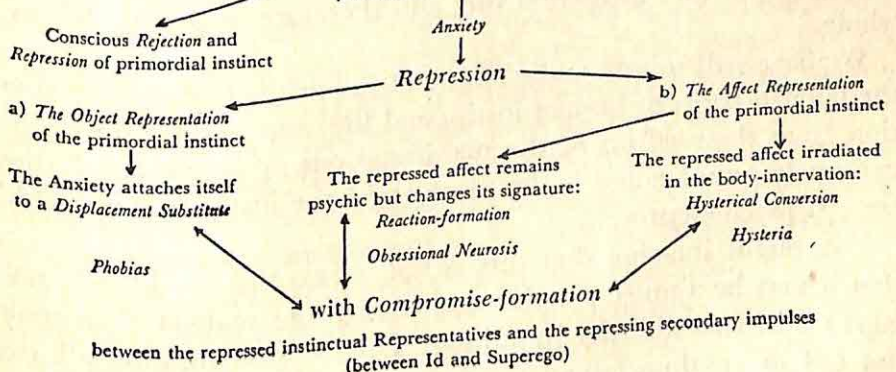
III. Loss of Object



IV. Abnormal Course of Instinctual Activity

1. Regression: Retro-grade instinctual anachronism substitute performance
2. Anterograde instinctual anachronism: *Annulment*
3. Running to waste
4. Transference of instinctual affect to substitute-object as surrogate: substitute gratification
5. Conversion of affect. Transformation of instinctual affect into another form of energy

V. Instinctual Conflict



Fourteenth Lecture

The Psychic Systems: Conscious, Preconscious, Unconscious. Repression and Regression. Introduction to the Psychology of the Ego

Ladies and Gentlemen:

In the last lecture we subjected the collision of instinctual impulses or "drives" and the various possible ways of resolving it, to an exhaustive examination. We started from the general biological standpoints and formulations, postponing our examination of the extremely complicated processes in the instinctual life of human beings in order first of all to study these processes in simpler organisms and reflex mechanisms. Our hope that by such a preliminary biological inquiry we should finally succeed in understanding the complicated mechanisms of psychoneurotic symptom formation was not a vain one; for we were able to trace a number of general biological laws which are characteristic of the instinctual conflict, no matter on what biological level it occurs, or under what special conditions. These biological laws of the instinctual conflict, as you will have convinced yourselves, are in complete agreement with what psychoanalysis has told us of the nature and origin of psychoneurotic symptoms; they lead, in agreement with Freud, to a dynamic-economic conception of the instinctual life, and therefore of psychic life as a whole.

We have still to follow the effects of the instinctual conflict along the tangled paths of human instinctual life, and to trace the derivation from these effects of the manifestations or symptoms of those extremely complex and faulty products of the instinctual life which we call psychoneuroses.

You might imagine that this is not an excessively difficult task; that it may be a much simpler matter than the analysis of an analogous instinctual disorder in animals. For the animals, after all, cannot tell us anything about the causes of the disorders which they

manifest, while a human being has the faculty of speech, and can therefore, when questioned, owing to his introspective observations, tell us at once what has caused his pathological symptoms. But this assumption would be entirely erroneous. If we were to question such a patient as to the nature and origin of his symptoms we should either obtain no information whatsoever—he would simply say “Well, if I knew that I shouldn’t come to you!”—or we should at most elicit a few quite fatuous and often positively grotesque and foolish assumptions, which ignore all scientific logic, and tell us, at all events, that the patient is entirely ignorant, not only of the nature, but of the very existence of the instinctual conflict which is raging within him. Thus, for example, such obviously psychic symptoms as anxiety are very often misunderstood as to their true nature, and are attributed, in accordance with the process of agglutinated causality, to some physical trouble (“heart disease,” “asthma,” etc.). In conversion hysteria this is invariably the rule. I have never yet seen a hysterical patient who recognized that his symptoms were psychogenic, and who was not extremely surprised, and perhaps offended, if the physician, however cautiously and considerately, hinted at their psychogenic nature in the course of the first consultation. Even the simple diagnostic exploration of such a case—that is, the sounding of a profound anamnesis, while cautiously probing for psychic complexes and conflicts that may possibly be concealed behind the mask of the superficial troubles which are the first to be described—generally takes a very long time (Brun, 1928). Further, it often takes a long time to induce the patient to confess to his actual psychic troubles, since he generally withholds them, even if he is fully aware of them. A female patient, for example, will admit only to headaches and insomnia. Only in the course of further exploration does one learn that behind these symptoms distressing obsessive ideas are concealed, from which the patient has been suffering for years, but of which she has never yet dared to speak to anyone, because of their distressing nature. Anyone who has undertaken a further psychic exploration of such “neurasthenics” knows how often an aggravated phobia is concealed behind these troubles—for example, the patient is afraid that he is suffering from a spinal complaint, or is paralytic, or will soon be so. It is obvious that this phobia will be kept a secret, owing to its derivative from the masturbation complex, for to con-

fess it would involve the revelation of the patient's "secret vice." It often happens, too, that a male patient is at first ashamed to speak of a permanent state of impotence, admitting it only when insistently questioned; afterwards it appears that this impotence is really his chief trouble, his real reason for consulting a doctor, and that the symptoms of which he complained at first were only the facade, screening his principal trouble.

What is the reason of all this? In the last lecture you were told that an instinctual conflict, if it assumes a serious form, always ends, at first, with the—temporary or permanent—suppression or inhibition of one of the two instinctual demands which are in collision. And as a rule the more primitive, the phylo- and ontogenetically older instinct is inhibited. Now, all of us, in our daily life, are constantly experiencing instinctual conflicts on a small scale, and these miniature conflicts, as you know, usually occur in the full sight of consciousness, and hence, in most cases, are consciously decided. I am referring to the conscious decisions of the will which we continually have to take between two or even several antithetical inclinations.

An example: I am tired this evening, and would rather read a little of the interesting new novel that I began last Sunday, and then go to bed early. But I still have to complete an urgently needed piece of work which positively ought to be finished this evening, for I have promised to deliver it early tomorrow morning. So it is no use—I must work, however unwelcome the notion of work may be at the moment! Moreover, the completion of the work will have the great advantage that I shall breathe all the more freely tomorrow, and shall be able to enjoy my leisure undisturbed by the reproaches of my conscience.

In this case, as you see—and in all similar cases—the instinctual conflict is resolved by the conscious repudiation of the impulse which is directed toward the gratification of the interests of the moment. The gratification of the suppressed impulse is not cancelled thereby, but is merely postponed to a more convenient time. Such a resolution of the collision is evidently possible here because in these cases the two incompatible impulses are conscious, so that the instinctual conflict takes place in the full light of consciousness. So if the neurotic knows nothing of the instinctual conflict which underlies his symptoms, this is evidently because in this case the conflict is taking place under the threshold of consciousness. This does not prevent the unconscious conflict from producing very important re-

sults—namely, the psychoneurotic symptoms. We see, therefore, that we are compelled to postulate a psychic unconscious; that is, we have to assume that a considerable proportion of the processes of our psychic life do not take place in our consciousness, and that this unconscious psyche may nevertheless exert the most lasting retroactive influence on our moods and feelings, our resolutions and our actions—in short, on our whole behavior.

We know, however, that the psychological experts raised the most persistent objections to Freud's postulate of an unconscious psychic life. Accordingly, we must not neglect the task of briefly justifying this postulate, whose acceptance, even on purely practical grounds, and as the result of the psychoanalytical observation of patients, is an imperative necessity.

To begin with, we have to remember that at a given moment a relatively small number of feelings, sensations, affects, ideas, volitional impulses—in short, relatively small amounts of psychic content—are present in our consciousness; that the overwhelming majority of all psychic contents are, at that moment, latent. For example, if I now utter the word "elephant" you will admit that none of you had been thinking of this pachyderm a little while before I spoke; it was not present in your consciousness, but you were unconscious of it. Nevertheless, the latent engrams are usually at our immediate disposal if they are liberated by an external sensory stimulus or by so-called "contact association" (mnemic ecphoria). Yet, it cannot be disputed that the latent engrams are unconscious; they become conscious only when, and in so far as they achieve ecphoria—that is, are caught in the searchlight of the perceptual apparatus which is constantly sweeping across the vast, dark space where our latent engrams are stored, in proportion to the ecphoria precipitated by sensory experiences, or by the mneme. Yet it would not on that account occur to anyone to assert that the latent engrams do not form part of the psyche. But only that is conscious which at a given moment is apperceived; all else is unconscious. An unconscious psychic element—whether a feeling, an affect, a sensory perception, an idea, a volitional impulse, or what not—is therefore an element which we do not notice at a given moment, but whose existence we must assume on the strength of indications and evidence elsewhere.

The conventional equation of "psychic" "with "conscious" is in

admissible merely on account of the primitive fact of the dormant memory, the latent store of engrams. But there are other reasons also why it is inadmissible: above all, because such a limitation of the psyche to the conscious would simply fail to explain a whole series of psychic performances which we can observe every day, both in ourselves and in other people. That is, all such performances as take place in the full light of consciousness, but whose explanation presupposes other psychic processes, which do not themselves emerge above the threshold of consciousness. We say, in such cases, that the association has progressed from a conscious content, *a*, through an unconscious link, *b*, to a third, but now again a conscious content, *c*.

But first of all there are the so-called "subconscious apperceptions."

A familiar example to be observed in everyday life is the accustomed journey to the place of business, during which spatial orientation is generally quite automatic and unconscious. For example, in the train or tram one can become absorbed in the morning paper without fearing that one may be carried past one's stopping place.

A further example of this kind, which some of you must have experienced, is the habit of automatically counting the strokes of a clock. One wakes in the night, and hears the clock striking in the church tower. The first strokes are not yet consciously apperceived; still less are they counted. Nevertheless, while the clock is striking—let us say, at the seventh stroke—we begin to count, and count correctly, until the twelfth stroke has sounded. Consequently the first six strokes must somehow have been registered unconsciously, and even numbered.

It is thus impossible to deny that quite complicated acts of apperception may be performed subconsciously, and even unconsciously, without therefore being less accurate; indications of time and place will be automatically registered, and just as automatically they will provoke the proper reactions; the consciousness plays no part in such processes. If it were otherwise we should indeed be the victims of "the Toad's curse," like Meyrinks' millipede, of which I spoke in a former lecture. If we could not, in all these cases, reckon the subconscious or unconscious associative links as elements of the psyche, and refer to them for the explanation of conscious performances, all these performances would be inexplicable: the psychic continuity, the internal connection, would be irreparably destroyed, and we should be compelled prematurely to restrict the sphere of psychological research and to renounce all hope of a causal explanation of the phenomena in question.

This has already been illustrated by an example of experimental psychology which was mentioned in a previous lecture. I am speaking of the remarkable case of posthypnotic suggestion, in which the hypnotized person will often carry out a complicated order some days after it was given during a hypnotic trance, without having any suspicion that he is obeying an alien will. On the contrary, he is convinced that he is acting on his own initiative. The suggested, posthypnotic performances impress him as being completely spontaneous, and the realization of his own acts of volition. He may indeed be surprised by his own actions, and unable to understand how he came to perform them, but he has not the least suspicion that they are due to the influence of an alien will. Here, then, we have a case where a conscious performance has as its postulate unconscious links, and becomes intelligible only when we know what these are.

The experiment of posthypnotic suggestion tells us something more: the unconscious psychic content—the suggestion made during hypnosis of the action to be performed—became, at a definite moment, not only subsequently conscious, but also dynamically effective—that is, it influenced action, although the real motive of this action—the suggestion of the hypnotist—did not at the same time enter the consciousness. Here, in a certain sense, we have the artificial pattern of a neurotic symptom. In particular, the execution of the posthypnotic suggestion is structurally exactly like an obsessional-neurotic symptom; for example, like the conscious processes which occur during the execution of a compulsive action. Here too the patient often acts without having the least notion why he is acting in such a manner. He puts up with his symptom without understanding that it springs from an unconscious, repressed volitional impulse, and its conflict with the prohibiting superego. Of the whole process, apart from the motor actions to be performed, he is often conscious only of the irresistible urge, the compulsion even, to perform this action, which he himself criticizes as senseless; and of an obscure anxiety which underlies the compulsion; or he transfers the anxiety to a specious cause. But its true cause, and with it the real motive of his action, remains just as unknown to him as to the hypnotic subject who carries out a posthypnotic command. The com-

pulsive action appears to have no real cause; it is a categorical imperative, without any intelligible relation to the total personality.

As regards the conscious processes we find exactly the same structure in all psychoneurotic symptoms, whether in a phobia or a hysterical manifestation. The symptom always seems to be somehow unmotivated, it has no connection with the total personality, but rather intrudes upon it like a foreign body. The patients submit to their symptoms, and the only explanations which they can give us are mere pseudo-reasons, so-called secondary rationalizations.

The one thing common to all these processes is this: a psychic content which remains unconscious (ultimately an instinctual desire and the inner anxiety in respect of this desire), despite its exclusion from the consciousness, exerts the most intensive influence over the bodily and mental processes, which occur in the consciousness. Here it might be objected that these unconscious elements—the unconscious motives—are not “psychic” in the real sense of the word, but that we have here some sort of physiological process, like the reflexes, whose liberation occurs unconsciously, and which are not amenable to the control of consciousness. Under certain conditions these non-psychic processes can, as it were, turn themselves back into a psychic action. Such an assumption however would only lead to a dispute as to terms: Naturally, all psychic processes have a material, physiological basis, which may perhaps consist in colloidal changes in the excited neurons; but this is true of conscious as well as of unconscious processes. One might with the same justification describe the conscious processes as “physiological” and deny that they have any psychic quality.

A second objection to the existence of a psychic unconscious in Freud's sense of the term was once advanced by Janet. This neurologist believed that in the “unconscious” psychoneurotic mechanisms we have actually examples of a splitting of the consciousness, such as may actually be observed, in its pure form, in rare cases of hysteria. It actually happens, in rare cases, that a hysterical patient will suffer a complete splitting of the personality, so that for months he will be one person, A, and will then, suddenly, without any transition, change into a second person, B. Each of these persons lives in his own way, which is entirely different from the other person's way of life; they have quite different interests, and move in different social

circles, much as a criminal who lives a double life, but with the difference that the hysterical patient, as person A, knows nothing of his second existence as person B. It is just the same—in Janet's opinion—with the psychoneurotic symptoms in detail; they are the product of a "part consciousness," which has in a sense split away from the total personality, and now, disconnected from the latter, lives a sort of parasitic life of its own. This ingenious theory, however, as far as I can see, does not explain the *modus operandi* of the psychoneurotic symptoms; for in a splitting of the consciousness there is a splitting of the total personality: each of the two persons thinks and acts, subjectively and objectively, in a perfectly conscious manner, and perceives all the happenings in the outer world just as consciously as any normal person (which is why they seem perfectly "normal" to those about them). The two persons do not get in each other's way, since they make their appearance successively. The psychoneurotic symptoms, on the other hand, appear simultaneously with the normally perceiving and normally behaving remainder of the total personality, and continually disturb the latter, in the most unpleasant manner, in the development of its normal functions.

In the light of these examples the existence of unconscious psychic contents is abundantly evident, and appears to be proven beyond a doubt. But on sifting these contents we find that we must divide them into two different groups, which are distinguished one from the other by their relation to consciousness:

a) The contents of one group—which includes, above all, the contents of the latent or dormant memory (but, as we shall see, it does not consist exclusively of these)—are apparently unconscious for the time being simply because the searchlight of the consciousness—that is, apperception—is not shining on them. But as soon as it does fall on them the engrams in question are ecphorized and become conscious. These contents, therefore, are at all times at the disposal of the consciousness; they are in themselves capable of consciousness. Such psychic contents we shall call, with Freud, the pre-consciousness (Prc). They share, with the contents which emerge into the consciousness, the qualities of logical organization according to value, time, and causality, and have definite object and affect representations, the result of the modifications of the faculty of percep-

tion. By this structure they betray their origin in the sphere of the consciousness—that is, of the sensory organs of perception.

b) A second category of unconscious contents consists of those which can no longer obtain direct access to the consciousness. They are not, like the preconscious contents, always at the disposal of the consciousness upon their external or internal (mnemic) ecphoria, but are indeed extremely refractory to conscious ecphoria; they have become, as a matter of fact, incapable of consciousness. These psychic contents incapable of consciousness comprise the unconscious in the narrower sense of the term (Unc).

The nucleus of the unconscious (strictly speaking) consists of the affect and object representations of the archaic primordial instincts as they were liberated and experienced in early childhood. In accordance with their origin, these unconscious instinctual contents are not logically organized in order of their value, time, and causality, but remain completely timeless and alogical—that is, without causal relations to one another or to the outer world—that is, to reality—in more or less chaotic juxtaposition. They cannot bear any relation to the reality of adults or to the present, because the power of testing the reality of phenomena is of comparatively late development in the child, representing an ontogenetically late acquisition. The unconscious, therefore, is not under the control of the reality principle, which first develops from the logical ordering of the world of perception and in adaptation thereto; but its contents are subject exclusively to the pleasure principle. According to Jung (cf. Lecture 2) the unconscious contains also phylic, inherited engrams, namely, the so-called archetypes: that is, typical, congenital, symbolic “form complexes” or “Gestalt complexes” of perception and conception—engram complexes which have never been conscious. Further, a great part of the precipitate of the earliest instinctual experiences can never have been conscious, at least, in the sense of a conscious modification by thinking, such as occurs in adults, since they stem from a time when apprehension of the emotional experiences through the instrument of logical thought was not yet possible, for in early childhood this instrument did not as yet exist.

Besides these contents which were never really conscious—the so-called “primal repression”—the unconscious contains precipitations of later instinctual experiences, which were once fully conscious, but

which could not be subjected to the test of reality and to logical modification, because, on account of their close relation to similar complexes of the primal repression, no sooner had they emerged than they came into collision with the secondary impulses, releasing anxiety, and were therefore repressed. We speak in this sense of secondary repression. These secondarily repressed contents play an essential part in symptom formation in the psychoneuroses. Under certain conditions—that is, through free association in the course of psychoanalytic treatment—they may rise once more into the consciousness, though with pronounced resistance, and usually with intense development of anxiety,

The “thinking” of the early infantile stages of development is entirely different in character from the logical thinking of adults. It is archaic thinking, such as we still find to a great extent among primitive races, even in the full light of consciousness. The structural analysis of this primitive thinking of the uncivilized peoples reveals a complete parallelism with the corresponding processes in the young child and in the unconscious of the adult, especially of the neurotic.

According to Lévy-Bruhl, Frazer, Roheim, and Winthuis it may be described as “symbolic-sexual, identificatory, animistic-personificatory, participative and collectivistic thinking.” According to Winthuis, the sexual-symbolic thinking of all primitives reveals a remarkable uniformity. This ethnologist—who was, it should be noted, a Catholic missionary—in his work on the *Zweigeschlechterwesen* (hermaphroditism) of the Gunantunas (a totemistic South Sea people of New Britain) describes very vividly the occasion on which he first realized this peculiarity of primitive thinking:

“One day I was singing, unthinkingly, one of those songs which I had learned from the natives—melancholy, but not displeasing to European ears. A native who happened to be passing called my attention to the fact that the song in question was indecent. I asked him, in astonishment, how that could be possible, seeing that not a single indecent word occurred in the song? Nevertheless, the song was offensive, he insisted, without further explaining its meaning.” Winthuis resolved to get to the root of the matter, and a very intelligent young native acted as his guide and teacher. Winthuis discovered that not only this song but all the songs which the natives used to sing at their cultic festivals were far from meaningless, as he had always been assured, but that they had, without exception, a double meaning—the ordinary, verbal meaning, and another symbolic meaning. And it appeared that the secret double meaning of the apparently harmless songs and sayings was almost exclusively a sexual meaning. Later on the author noted that in explaining this meaning one must keep a certain thing in mind: the shape of the objects or parts of the body which were designated by the words. He discovered, gradually, that everything long,

hard, and erect denoted the male genitals; anything round or oval, even the eye, or a hole (especially a "water hole"), the mouth, and anything open denoted the female genitals. For example, the words: *mata* (eye) and *mgia* (mouth) meant also the vagina, while *bilauna* (nose), *kearamea*, (tongue) and *rumu* (lance) meant also the membrum virile. When Winthuis once, in an address, unsuspectingly used the word for "nose" the people began to laugh, and afterwards they explained to him that he must never again use this word in a sermon. Thus, according to Winthuis the most ordinary words in the everyday speech of the Gunantunas have, besides the literal meaning, a secret, sexual, symbolic meaning. This sexual symbolism, it may be remarked, is entirely identical with that of dreams, and with the symbolism of the unconscious manifestations of the neurotic. This applied even to most of the legends and myths of the Gunantunas, and also to the ornamentation of their cultic articles and artistic productions. Finally, in addition to the symbolic language or words and images, these savages have a sexual-symbolic language of signs, so that many apparently harmless gestures have a secret, sexual meaning in addition to their ordinary significance. For example, the extended forefinger means the erected male member; to point to the eye is equivalent to a solicitation to coitus, etc. Even civilized people, as we know, make such movements, often quite unconsciously, as so-called "symptomatic actions," and here analysis, with the help of free association—keeping in mind the situation in which the symptomatic action was performed—very often reveals the fact that the latter has a sexual significance.

But that even among civilized peoples the sexual-symbolic double meaning of many allusions and gestures is by no means confined exclusively to dreams and to neurosis is a fact known to everyone who is acquainted with the popular and colloquial idioms of the European peoples, or has listened to the ribaldry of soldiers and sailors. The difference, in respect of the primitive peoples, consists only in this—that the sexual-symbolic double meaning of the relevant words and gestures among civilized peoples is consciously realized, as a rule, only in certain situations—for example, when they are not working or otherwise seriously employed. That is, a certain attitude is essential.

On this all-pervasive fundamental attitude of the primitives are based, according to Winthuis, the other peculiarities of archaic thinking, which in civilized people are characteristic only of the unconscious; for example, identificatory thinking. Two things which in themselves are entirely heterogeneous are equated purely and simply on account of an external similarity of form. For example, according to Winthuis, the streaks and ovals painted on male and female dancers (the so-called *daka* or love-charms) are not, for the primitives, mere symbols of penis and vagina; they are the male member or the woman's vagina, which dance together. This identification is based on another, third peculiarity of the archaic thinking of uncivilized peoples, on their animistic thought, in which absolutely nothing is without life. "In his (the primitive man's) view of the world everything is alive; the stone, the scrap of wood, the earth, the wind, the stars, the rain, and even the paint which the dancer applies to his face and body." Here Winthuis rightly points to the fact that even in the European child such animistic, identificatory thinking is quite an ordinary thing; for the little girl, for instance, the doll is actually a living creature, and not merely a symbol of the child. And here he even draws the parallel between

phylogeny and ontogeny. A fourth peculiarity of primitive thinking, which with us occurs only in the unconscious, is participative thinking; a part takes the place of the whole; the vagina, for example, is substituted for the whole woman, the membrum for the whole man; conversely, a little man can be taken to mean the male member—and again, this is completely analogous to the thinking of dreams. And here too lies the reason why the waste products of his own body are so carefully removed or buried by the savage; the essence of the producer has passed into them—indeed, they are that essence; they could therefore be placed under a spell by an evilly disposed person, and illness or even death would follow. As a last peculiarity of the primitive mode of thinking Winthuis mentions collectivistic thinking; this is so pronounced in the exogamous tribes that in them the whole marriage-class, the clan, is of one blood. If two members of the same clan have infringed the taboo by committing "incest" together it may happen that instead of the offenders, who have fled, two other members of the clan will be killed. Even this conception, so completely alien to civilized peoples, finds parallels in dream-thinking, in the so-called "displacement of accent," in illustration of which Freud, in his lectures, told the familiar tale of the village blacksmith who had committed a capital crime. Since he was the only blacksmith in the village, and therefore indispensable, one of the three village tailors was hanged in his stead. In the reality of "civilized" European life of the twentieth century similar things occurred, as we know, as phylogenetic regressions in the "administration of justice" in certain totalitarian States during the second World War—but with the difference that in the system of hostages then practiced a sinister sadism was at work, which does not occur with such intensity among the so-called "primitive" peoples.

Since in early childhood—that is, at the time when the engrams afterwards repressed in the unconscious are formed—there is as yet no such thing as abstract thinking, the unconscious of the adult cannot contain abstract contents; so that unconscious "thinking" must always be purely pictorial. Thoughts, reflections concerning events and experiences in this early phase, are therefore, in unconscious thought, analogously to the identificatory and participative thinking of the primitives, always and solely in the form of concrete images; that is, they can only be objectively represented, as in the Egyptian hieroglyphs. Consequently, unconscious thought will know no limiting conjunctions or negations. It cannot express a negative, because the archaic primitive impulses from which this thinking originates consist in their very nature of passionate desires and affirmations: negation does not oppose them until a late phase, in the form of the restricting, prohibiting and penalizing secondary instinctual impulses.

But as soon as these latter have assumed control, and as soon as the moral superego has been set up over the "egoistic" ego, a state of

tension is bound to arise on the boundary between the ego and the id (as Groddeck has appropriately named the instinctual unconscious), which will be felt all the more unpleasantly the greater the differential of excitation between the urging, demanding, instinctual id and the limiting and forbidding superego. It is this painful tension which finally enforces the repression of the archaic instinctual contents—i.e. their expulsion from the consciousness. But since these contents—as urges and desires—continue to press against the frontier of consciousness, seeking to enforce their return to consciousness, and thereby their realization in action, the defensive tendency of the superego will be correspondingly enhanced by induction, until a reliable protective barrier against these urgent impulses has arisen in the shape of firmly-knit conditioned inhibitions. These constitute what is at first an almost insuperable resistance to the entry into the consciousness of the repressed and henceforth unconscious impulses. The power of this resistance is at any time directly proportional to the magnitude of the excitation differential—that is, the tension existing between the instinctual archaic trends and the opposing tendencies of the superego. All that consciousness—the ego—finally perceives of this collision is a more or less painful (anxious) emotional tension, which in the case of extreme excitation differential may amount to acute anxiety. In figurative language, it is as though the ego were afraid of the id as well as of the superego—that is, as though it were afraid that a collision between the id and the superego might have catastrophic results for the ego. The ego is afraid of the inner or instinctual danger, and rightly so, since the collision, if allowed to operate unchecked, would injuriously affect the continuation of the normal nervous activity—that is, the relations of the organism to the present reality.

However, with the progressive building up of the conditioned inhibitory reflexes these processes are gradually automatized in such a way that normally they will no longer give rise to any serious disturbances of the individual's health and well-being. All the conflicts occurring in early childhood, together with their contemporary consequences: the admonitions, reproaches, threats and punishments, as well as the anticipative anxiety in respect of the repetition of such unpleasing incidents (the nucleus of the future moral culture!) left behind them, of course, chronologically superimposed engram com-

plexes which we might perhaps compare with the records of a criminal court. This store of engrams of former collisions constitutes an essential, integrating component of the ego-formation, since it is from the conflicts with the environment—from the first painful bump on the head to the first punishment—that the need first arises to distinguish between the inner instinctual demands and the external reality. As long as there is no possibility of such a test of reality one can hardly speak of an ego. The ego is born of this painful encounter with the outer world. What existed before this was only the chaotic precipitate of primitive instinctuality, in which inner and outer reality were still one, indistinguishable one from the other. Hence, in this phase of earliest childhood, which Ferenczi described as the "autoplastic stage," or the protopsyche, disturbing stimuli from the outer world were still answered exclusively by changes in the child's own body, instead of by the attempt to change the environment by outwardly directed motor reactions (cf. Lecture 17 p. 335).

The unpleasing reality which opposes itself to instinctuality is therefore represented, for the child, almost exclusively, at first, by the forms of the commanding, forbidding, admonishing, threatening, punishing preceptors, whose authority is based, on the one hand, on their greater strength, and on the other, on their indispensability for the child. The result is that the child, as was explained in an earlier lecture, finally adopts as his own the principles of these persons in authority; he absorbs them, as it were, assimilates them, so that they become a part of himself, and so, through this process of introjection, the superego gradually comes into existence. From this stage onwards the child acts morally, apparently on his own initiative, just as a person who is carrying out a posthypnotic suggestion is no longer aware of its origin but believes that he is acting entirely on his own inner initiative. Thus, on the frontier between the ego and the unconscious, that is, in the preconscious, a reliable regulator has been evolved, which, according to the present situation, ecphorizes the results of the mnemically recorded experiences of earlier collisions, in the form of organized, conditioned inhibitory reflexes. The function of this regulation is, as we have said, completely automatic and unconscious—just as automatic and unconscious as the expert execution of complicated manual movements in writing, for

example, as in driving a car. Like a sluice, or like a rheostat, it regulates the excitations arising at any moment from the unconscious, inasmuch as it admits into consciousness, and therefore to the motor system, only such quantities of the stimuli of the primordial "drives" as can be tolerated by the ego. This "protective barrier against stimuli" (a barrier against the dangerous impulses of the id) operates, therefore, like a sort of censorship, deciding which, and how many of such tension-charged instinctual representatives can at any moment be allowed to pass through into consciousness without coming into painful collision with the superego.

But now, after these rather difficult biological explanations, let us return to the process or the nature of repression. After what has been said it should be clear that the unconscious contents of the instinctual infantile id remain in repression only because their return to consciousness would be attended by "unpleasure." The resistance to their emergence into consciousness is therefore based on the fact that these repressed complexes are always painful for the consciousness. But here you may contradict me. You might remark that of course these unconscious complexes of the id always strive for instinctual gratification, or have such gratification for their content, and instinctual gratification is, as I myself have told you, always pleasurable. It is therefore a priori difficult to understand why an instinctual impulse should be condemned to repression.

Regarded from the standpoint of the primordial instinct this objection is doubtless justified. What Nietzsche said in his *Zarathustra* is perfectly true of the instincts: "All pleasure seeks eternity." But you are forgetting the collisions; that is, the fact that since the emergence of the superego the instinct is no longer autocratic, but is, unfortunately, continually coming into conflict with the requirements of the cultural secondary impulses. The unpleasurable ingredient of what is happening in the censorship apparatus of the preconscious is, naturally, not the uprising archaic instinctual impulse itself, but simply the collision; that is, the feeling that one has come into conflict with the requirements of the superego.

The purpose of repression is therefore not a hedonic gain, but exclusively the avoidance of unpleasure. The censorship's protective barrier against stimuli, with its conditioned inhibitory reflexes, operates in a very similar manner to the apparatus of the nociceptive

pain-reflexes of the spinal cord, which was mentioned in the last lecture.

Since repression presupposes the building up of the superego, or at least the completed formation of the ego, it cannot be a primal mechanism of defense. More primitive defensive mechanisms of the ego—defending it against the collision of instincts with the reality, and against the unpleasure arising from such collision—are lies, for example, simulation, and scotomization, whereby certain knowledge, which would be distressing to the consciousness, and above all to the narcissistic ego, is cut off without being already repressed, which is explained by the fact that things which one is not willing to see in oneself are very easily perceived in others; in the words of the Bible, one sees the mote in the eye of one's neighbor, but not the beam in one's own. Consequently, the process of scotomization may lead to projection, in which the processes of one's own inner mind are transferred to the outer world; for example, someone is unwilling to confess that he is in love with another person, because this love would be of a criminal nature. The internal defensive process is now projected outwards, with the result that one feels that one is being persecuted by the other person, at first with love, but afterwards with hatred. If this feeling of being persecuted is detached from the original object and generalized, we have a case of the typical psychotic persecution mania. Similar processes are in operation in the case of hallucination, in which the internal instinctual excitations are materialized in the outer world, inasmuch as the excitation takes the apparatus of perception in reverse.

If, in conclusion, we ask ourselves: What is it in the instinct that is repressed? and what is unconscious?, the answer can only be as follows: In itself, every instinctual impulse is unconscious on its first emergence. If the impulse has not as yet attached itself to external objects, with the corresponding acquired qualities of affects, we perceive of it merely the obscure impulsion which we described, in a former lecture (after Monakow) as primal sensation. You will understand, after what has been said in previous lectures, that this primal sensation itself can never be repressed, since it is hormonally evoked. The repression affects merely the instinctual representative—that is, whatever represents the instinct in the consciousness. It consists of two components:

a) The instinctual affect—that is, the conscious affective charge which first arises through mnemonic engraphy from earlier instinctual experiences, and therefore has specific qualities, and

b) The instinctual object, that is, the idea of the object, or—in the narcissistic autoerotic impulses—the idea of the instinctual process.

Only these instinctual representatives may not appear in the consciousness. But since the instinctual energy—that is, the amount of excitation—cannot be in any way affected by the repression of its representative, or diminished, or annihilated, all the various mechanisms of substitution and displacement which we studied in the last lecture now come into operation. One process which is never omitted, at all events, by the neurotic instinctual displacements, is regression: that is, the turning back to the past of the instinctual impulse, the regressive cathexis with libido of former affect and object representation of the instinctual impulse which has encountered obstacles in the present.

Especially remarkable in such a case seems the repression of affect: the fact that a psychic content—for example, a memory, as such—can remain completely accessible to consciousness, while the affective charge attached to it, and only this, is repressed and sinks into the unconscious, but without losing its dynamic effectiveness outside the unconscious. Experimental proof of these facts can be found in the psychogalvanic reflex phenomenon (Veraguth), and I myself once obtained this proof, in experimenting on myself, as a student, in a very impressive manner:

With a few friends, as a student, I was attending the neurological lectures of Professor Veraguth. One day the lecturer was demonstrating his improved psychogalvanometer, and each of us in turn had to offer ourselves for the purposes of experiment. When I had taken my place at the apparatus one of my friends called out a certain slogan, knowing that for me it had once been associated with events which were affectively-charged in a very high degree. The memory of these events had faded years ago and was now entirely devoid of affect; so that even when I heard this slogan uttered behind me I was not conscious of the slightest emotion, but remained perfectly indifferent and unmoved. What was my astonishment when the beam of light from the indicating mirror made a sudden movement and rose steadily up the scale, reaching a deflection of at least fifty centimetres! And this, although I did not feel the faintest conscious excitement. But the repressed affect had none the less stimulated the sympathetic system and had caused the corresponding alteration in the electrical permeability of the skin.

Recently Federn, proceeding from Freud's conception of the "ego-libido," formulated a new psychoanalytic theory of the ego which is not only theoretically interesting, but is also of some practical importance. According to H. Meng it may be briefly described as follows: The ego is a permanent cathectic unity which everyone can perceive and feel in himself. The healthy ego is clearly and sharply conscious of its boundary when confronted with the outer world and the object representatives. The cathexis at the gates of the senses, which are turned toward the outer world, surrounds the body-ego. This is confronted by the psychic ego, which is experienced as the centralized cathexis of the psychic processes, and as though it were situated inside the body-ego. Modifications of cathexis are constantly occurring on the ego-boundaries. Affective processes correspond with changing cathexes of the ego-boundaries, with instinctual energies of different kinds, which are narcissistically directed. Affects are therefore sensations which the ego has when it is aware of itself, or, to be more exact, when one ego-boundary meets the other ("self"). If the affect is liberated by an actual relation to an object it is experienced at the boundary of the ego. The energy, the cathexis, which the ego perceives, the man experiences in the ego-feeling. We cannot enter more thoroughly into this doctrine of the ego here, but it should be mentioned that it has proved to be of some practical importance, as it explains the genesis of conditions of estrangement from reality, such as "depersonalization" and the feeling of "déjà vu," and also because Federn, on the basis of his researches into the ego, hoped to work out a new method of the psychoanalytic treatment of the psychoses.

B. THE BASIC PSYCHOLOGICAL FACTORS IN INSTINCTUAL CONFLICT

Fifteenth Lecture

"The Psychopathology of Everyday Life"

Ladies and Gentlemen:

Having considered, in the last few lectures, the theoretical basis of the neurotic instinctual conflict, it is now time to study psychoneurotic symptoms with the help of practical examples. For this purpose we shall find it useful to begin by studying the simplest phenomena of the interference of the unconscious in the sphere of conscious psychic life—phenomena of which you have personal experience every day of your lives. I refer to the phenomena which Freud has aptly described as "the psychopathology of everyday life." They comprise cases of so-called parapraxis (faulty acts, mistakes), symptomatic actions, and dreams. The analysis of the structural laws of these comparatively simple and therefore easily observable manifestations of the unconscious provides the best introduction to the comprehension of psychoneurotic symptom formation, for in these structures we have, as it were, neurotic symptoms on a miniature scale, which will enable us to study *in nuce* the laws that govern unconscious psychic life.

(1) *Mistakes*

Among the simplest manifestations of the unconscious are cases of so-called parapraxis—i.e., faulty actions, mistakes. We understand by parapraxis those by no means infrequent instances when someone who is in the full possession of his intellectual faculties makes a verbal blunder of an apparently senseless and often embarrassing character: that is, in the place of what he intended to say he says something quite different; or he hears something wrongly; that is, he thinks he has heard something which was not actually said; or he mistakes one thing for another, or picks up the wrong thing; for

example, he pockets something that does not belong to him, or takes another person's overcoat or hat or stick in mistake for his own; or he leaves something behind—for example, his umbrella; or he mislays something which he urgently needs, so that it cannot be found; or he reads something wrongly; or he suddenly forgets a name which was present in his consciousness a few minutes earlier; or, finally, he forgets to do something he had intended to do, etc.

If we now ask ourselves under what circumstances such blunders are made, our experience tells us that they are particularly liable to occur:

a) during states of great physical or mental fatigue.

b) in states of so-called absent-mindedness; that is, when one is occupied with problems of special interest. For example, during a game of chess it will sometimes happen that one of the players, profoundly absorbed in the game, drops a pawn that he has taken into his coffee cup which he absent-mindedly stirs with his spoon. The so-called absent-mindedness of scholars and professors is proverbial. Really this phenomenon would be more aptly described as a mark of concentration; at all events, it betrays a very definite diversion of the attention from the external world, and a corresponding attention to what is going on in the person's own mind; that is, a derangement of the attention, inasmuch as normally this ought to hover equably above all the various things and incidents of the outer world. In primitive peoples this form of attention reaches a very high degree; and we find it well exemplified in the young child; it is the typical infantile form of attention, in which all the happenings of the outer world are noted and observed with equal interest. But the richer the inner life, the less attention, as a rule, is given to things in the environment.

c) also in moments of great mental excitement, and finally

d) in slight physical ill-health, especially during a violent headache, or in the prodromal stage of migraine, blunders are made more frequently than at other times.

It now seems perfectly comprehensible that the unusual psychophysiological conditions here described may cause disturbances of the attention which lead to mistakes; either too little attention is given to the thing that has to be done, because one feels "all in" (as in slight ill-health or extreme fatigue), or the mental state results

in a faulty division of the attention, as in great excitement or so-called absent-mindedness. Yet this simple explanation of blunders, which might perhaps be called the "psychophysiological theory of parapraxis," does not quite satisfy us, simply because blunders are constantly being perpetrated by persons who are neither ill, nor tired, nor distracted; for example, precisely when they are concentrating all their attention on the correct achievement of whatever they are trying to do, and when it is of the greatest importance to them that they should produce a perfect performance, completely satisfactory in every respect. Think, for example, of a speaker at a banquet. It is by no means axiomatic that a good performance is best guaranteed by increased attention. And the opinion that a performance is inevitably jeopardized by diminished attention is equally incorrect. We know, on the other hand—as was mentioned in the last lecture—that automatic actions which are carried out without any conscious attention are almost always correctly performed; such as taking the right turnings in familiar streets, or finding one's way about a city; one does not as a rule "go wrong," and if for once in a while one does take the wrong turning one is surprised, and unable to explain the mistake. Furthermore, the majority of automatic actions are carried out most correctly with a minimum of conscious attention; they are disturbed rather than assisted by conscious concentration on their progress (for example, piano-playing, writing, knitting). Yet again, if we carefully consider our mistakes we shall find that certain of their minor features cannot be satisfactorily—that is, causally—explained by the theory that excessive or deficient attention is responsible for them. For example, there are many mistakes which—when we have become aware of them—cannot be subsequently corrected, despite our utmost efforts to concentrate our attention upon them. This applies, of course, to the numerous cases of forgetting a name or mislaying an article; the missing word or name is "on the tip of our tongue," indeed, it gives us no peace; it positively persecutes us; the fact that we have forgotten it annoys and distresses us, so that we feel compelled to think about it incessantly. But all in vain! Despite all our efforts we cannot get hold of it. Indeed, we may even make things worse: for if we try to recall the forgotten name by way of a second name which has some association with it we may even find that we have suddenly forgotten this sec-

ond name, although until now it was always accessible to our consciousness. We say to ourselves, for example: "But that is the lady—oh, what is her name?—the lady who used to live in the town where there has recently been an earthquake!" And now it suddenly appears that we can no longer remember the name of the town! In such cases it often seems as though some imp were playing tricks with us; we may even exclaim, angrily, "Why, it's as though I were bewitched!" And by this exclamation we betray the fact that we ourselves don't really believe in the theory that the lack or excess of attention is responsible for our failure of memory; that we are perfectly well aware that some special psychic instance must have been at work. But we jestingly project this instance into the outer world, as an imp, instead of seeking the demon within ourselves.

It may even happen sometimes that a person endeavoring to realize a particular purpose will perpetrate blunder after blunder, making a whole series of mistakes of different kinds, which complete and aggravate one another, so that both the victim and the observer begin to feel that some malignant power must be at work here, deliberately planning to prevent the victim from achieving his purpose.

For example, someone forgets that he has made an appointment to meet an acquaintance. Over the telephone he makes a fresh appointment to meet his friend in a certain restaurant. He goes to the restaurant at the appointed time, waits in vain for some hours, and at last, much annoyed, goes home. Later on it comes out that the appointment was made to meet at quite a different restaurant. Finally he sends a written invitation in order to avoid further confusion. He waits for his guest—who does not appear! Questions are asked over the telephone: the reply is that the expected guest had received no invitation. Finally the would-be host discovers a crumpled postcard in his overcoat pocket; he had been carrying it about for three days and had forgotten to post it!

As regards the cases in which an object is mislaid, one might, of course, object that one had mislaid the article, or put it away out of sight, in a fit of extreme absent-mindedness. That is, the mistake was made in a sort of twilight of the mind. Naturally, what one had not consciously noticed one could not afterwards recall to memory. But this objection also is inconclusive. We know of many cases which prove that even a subconscious faculty of observation can function quite reliably. I will remind you only of the subsequent counting of the strokes of the clock, which I mentioned in the fourteenth

lecture; and of the subsequent recollection of a forgotten idea or intention when one returns to the place where one first conceived it. In such instances we have the counterpart of parapraxis; they show us that a theory which would attribute blunders etc. exclusively to defective attention cannot be correct. I do not mean to say that the theory is absolutely false; it is merely inadequate—it does not provide a sufficient explanation of the blunders. It merely tells us under what special psychophysiological conditions mistakes are most liable to occur—what external factors favor their occurrence. But what a purely psychophysiological theory can never explain is why, in any particular case, we spoke, wrote, or understood what we said, etc. exactly thus and not otherwise. Why, of all the thousands of possibilities, was precisely this one form of mistake made, and why at this precise moment?

In order to throw a little light on this question, let us turn to a celebrated case of a verbal blunder which Freud, in the course of his lectures, quoted from Meringer and Mayer:

A gentleman was describing, in a social gathering, certain scandalous proceedings. He continued: "Dann aber sind Tatsachen zum *Vorschwein*¹ gekommen . . ." (General laughter). On being questioned, he at once asserted that he had indeed privately regarded these goings-on as *eine Schweinerei*, ("a swinish trick") but had not intended to use this rather strong expression.

Already, from this one example, you can gather the whole psychological structure of the blunder:

1. The mistake has a meaning, which in many cases, where this meaning is fairly obvious, is correctly interpreted by other people. The laughter of the latter is sufficient proof of this, for they would not have found anything meaningless so amusing.

2. The mistake is evidently due to the fact that at the last moment a suppressed psychic tendency forces its way into innervation and thus exerts a disturbing influence on the conscious, "permitted" tendency. Thus, we have here a complete analogy to the processes in the conflict of drives which we have studied so thoroughly in recent lectures. You will remember that very often the result of the opposition of two tendencies is that the apparently suppressed or repressed impulse succeeds in breaking out somewhere, in a disguised form,

¹ Instead of *Vorschein* (*zum Vorschein kommen*, to come to light); *schwein* meaning pig, swine.

and prejudicing the operation of the victorious instinctual impulse (of the secondary instinct) by its disturbing influence.

3. In this case there is also apparent a compromise between the two tendencies—the conscious, permitted and the suppressed, prohibited tendency—a compromise which permits the expression of both ideas simultaneously in one word. Such verbal compromises are called condensations.

The following examples will demonstrate this mechanism very strikingly. They also show that the suppressed tendency may occasionally cause peculiar distortions of letters or syllables, in which the meaning of this tendency finds unmistakable expression:

While dictating a report concerning a patient suffering from a cerebral injury I gave a summary of the previous case history from the records, and among other things I dictated from an interim report of the doctor in charge of the case: "Patient received *Zaubertrucken* injectionen." ² I meant, of course, to say *Traubenzucker* injectionen.³

On the occasion of a dinner given to celebrate a jubilee, one of the company proposed a toast to the guest of honor. "Gentlemen, I ask you *auf das Wohl unseres verehrten Chefs aufzustossen*." ⁴

In all these cases the significance of the mistake is obvious. The worthy gentleman who was responsible for the "*Vorschwein*" would have replied at once, on being questioned, that he privately regarded the proceedings to which he had referred as "*Schweinereien*"—dirty tricks. As for the "*Zaubertrucken*-injectionen," the meaning of the mistake—which my secretary, naturally, greeted with laughter—was obvious after a brief self-analysis: I did not approve of the therapy in question, since injections of grape-sugar are indicated only when there is cerebral hyperemia, which did not exist in this case. The verbal distortion expressed my critical disapproval; I evidently wished to protest against the indiscriminate employment of the box of ampoules which was often produced, as a sort of *Zaubertrucke* ⁵ (magic box, box of tricks, etc.), even where its employment was quite inappropriate. In the case of the unfortunate toast, on the other hand, the speaker would never admit that his verbal slip concealed his unconscious intention to speak disparagingly of his ven-

² Roughly: "Magical box injections."

³ Grape sugar.

⁴ Which may mean "belch," instead of "*anstossen*" which means to touch glasses.

⁵ *Trucke*, in Swiss dialect = box.

erated chief, and he would end by losing his temper if we continued to press him to admit the truth.

Here you might raise an objection which at first appears highly plausible. You might say: In the first two cases one believes the explanation offered by the person who made the mistake, since he himself has given it. In the third case, on the other hand, that of the unfortunate speaker, one does not believe his express and solemn assurance that any tendency to speak disparagingly of his chief could never have entered his mind. What becomes of the so-called scientific nature of psychoanalysis, which, as we know, is supposed to rely on one's "free associations," if on one occasion one forthwith accepts the association as convincing, and on another occasion refuses to admit its relevance, because it doesn't serve one's purpose, since it is not consistent with one's preconceived opinion that the mistake must have a meaning? Well, such cases, in which statements have to be measured by very different standards, are quite familiar to you all in another sphere—namely, in judicial practice. Is it not a fact that when the prisoner confesses his guilt the judge, as a rule, will accept this confession as the truth? But, if he denies his guilt—I should like to see the judge who would forthwith believe his statement, and discharge him!

The different behavior of the three persons responsible for these verbal blunders is explained by the fact that they opposed very different degrees of resistance to the discovery of the secret motives of their mistakes. The degree of this resistance evidently depends on whether the disturbing tendency belongs to the preconscious or the unconscious of the fallible mortal. In the first case the meaning of the mistake will be accessible to consciousness, and if the person who made it is questioned he may at once become aware of it; in the second case, on the other hand, he will at first refuse to accept his own perception of the meaning, and it may even require a brief analysis to make him conscious of it. If he is unwilling to submit to this analysis—like the unfortunate proposer of the toast—we shall have to rely on circumstantial evidence in our interpretation of the mistake. In this way we shall arrive at an interpretation which cannot lay claim to absolute accuracy, but whose veracity will at least be more or less probable.

This applies, also, to those cases in which the meaning of the

mistake is not immediately obvious, and hence cannot be understood by uninitiated hearers and spectators. Yet here again a brief analysis, based on the free associations of the person who has made the mistake, will show that the mistake only appears to be meaningless. Often enough, in such cases, the person committing the mistake is not aware of it, and if those about him call his attention to it he is surprised, and may even vigorously deny that he has made it. It then, as a rule, turns out that the suppressed tendency which interfered with the conscious intention, and so caused the mistake, was suppressed a very long time before, and so had become a part of the unconscious.

The decisive difference between these three categories of mistake lies, as you see, in the depth of the suppression or strength of the repression which the disturbing tendency has undergone. In our first example (*Vorschwein*) the speaker was conscious of the suppressed tendency; that is, he knew that it had been in his conscious mind immediately before he made the mistake; it was repressed only at the last moment. In the second case (*Zaubertrücke*) the suppressed tendency was not present in the speaker's consciousness when he made the verbal slip, but it was in the preconscious, and was therefore once more accessible to the consciousness after a brief analysis. The speaker then recognized it as the product of his own psychic life. In this case the suppression was of longer standing, but the disturbing tendency was not yet repressed. Lastly, in the third case the speaker was evidently unconscious of the suppressed tendency both before and after making the mistake; it was repressed, and presumably this repression was of long standing. In all three cases, however, the suppression of an intention to say something that ought not to be said was apparently the indispensable precondition of a blunder.

Naturally, verbal similarities, phonetic contaminations, and the subconscious secondary associations, almost inevitably connected with a certain word, play an important part in the production of the mistake, since, in a sense, they prepare the way for it, indicating the path it can follow. But these external factors of phonetic similarity, responsiveness to association, etc. are evidently not decisive in themselves, for they are always present with every word we speak, so that if they were solely responsible we should always be making mistakes. But in the overwhelming majority of cases we do not make

verbal slips. In addition to the three preconditions mentioned—psychophysiological predispositions (fatigue, illness, distraction, etc.), phonetic similarity, and responsiveness to association—there must be some fourth factor before the verbal mistake is perpetrated, and this fourth factor is the disturbing tendency—that is, the interference of a preconscious, subconscious or unconscious counter-tendency which contradicts the conscious intention.

We find exactly the same structure in every other kind of mistake: the mistake is due to the interference of a second subconscious or unconscious impulse which disturbs the normal course of the transaction. In order to illustrate this let us consider the case of a graphological blunder which a colleague of mine related to me:

As an assistant physician at a great asylum for the insane this colleague had as part of his day's work to reply to a number of written enquiries, among which were some of such a nature that in answering them he could easily have violated professional secrecy. One day, when he was re-reading one of his replies before despatching it, he discovered, to his dismay, that the final sentence (the letter was addressed to an official correspondent) read: "I regret that I am unwilling to give you any more apposite information" instead of "I regret that I am unable" etc. (*wollen* instead of *können*.)

Here is an interesting case of misreading:

A married couple, in order to improve their acquaintance with the English language, were reading one of those modern works on sexual ethics which have recently had such a wide circulation in America. The husband and wife read a chapter aloud, alternately. When it was the wife's turn to read the author was dealing with the question of sexual liberty in men and women, and stated, among other things, that it was interesting to note how the old prejudices in this respect were beginning to disappear. In evidence of this he cited the result of a questionnaire, of the kind so popular in America, directed to the students of both sexes at one of the universities. The question was asked: Would you marry a man (or woman) who had already had sexual intercourse? The fact that this question was answered in the affirmative even by the majority of the young men was taken by the author as evidence of the advancing *process* of liberation from traditional prejudices. At this point the wife read "*this progress*" instead of "*process*." It is needless to add that she had had sexual relations before marriage.

In conclusion, here are two further examples of unconscious mistakes, which could be completely explained only by an exhaustive analysis:

A young patient came to the consulting room one day in a state of the greatest excitement. Something frightful had just happened to him. Before he took the

12 o'clock train to Zürich he had to attend to the outgoing mail. In doing this he had just exchanged two letters to clients, neither of whom was supposed to know that his firm was in touch with the other competing client. Owing to his mishap this carefully preserved business secret had been divulged, and there would certainly be a row about it. He hardly dared to face his employer. The analysis elicited the fact that the night before the patient had again masturbated, having recourse to a perverse masochistic fantasy, despite his solemn promise that this would not happen again. He was ashamed of his relapse, and had dreaded the next consultation, as he knew he would have to confess the embarrassing incident. At first the matter could not be further explained. As I had expected, it turned out, during the next few days, that the young clerk had not made the alleged exchange of letters. Here was merely a case of a deceptive recollection, which evidently had its origin in his resistance against confessing his embarrassing relapse. The alleged mistake was in a sense the substitute for that other failure, which he was unwilling to confess to me. Not until some time later was this peculiar case completely elucidated: The patient confessed to me that in his fantasy he had substituted the person of the analyst for the person of the sadistic torturer (his stepfather), whom he generally invoked for this purpose. Now we begin to understand the significance of the alleged exchange of letters; the patient had made such an exchange in his masturbatory fantasy; instead of employing the stepfather, as usual, he had, so to speak, "had relations" with the analyst (the father-imago). The curious error of recollection also served the purpose of an unconscious resistance; it revealed itself, in every respect, not only structurally, but in its content and its verbal symbolism, as a curiously complete displacement substitute for the actual offense, which, as you see, had its deepest roots in the Oedipus conflict.

Similar complicated processes could be observed in the following case, which related to the mislaying of a photograph:

In the course of analysis, a female patient told me that since the day when her best girl friend had died, she had mislaid this girl's photograph and it could not be found. Even on the occasion of a thorough spring cleaning it had failed to turn up. The free associations which I required from the patient elicited the following material: This friend had died of cancer of the womb. She was a teacher in the Institute of the French Swiss, where my patient, as a young girl, had been a boarder for a year. She had been greatly attached to this teacher, and ever since had kept in touch with her, constantly writing to her and often meeting her. The two friends had made repeated visits to Italy together, where my patient was introduced, by her older friend, to the masterpieces of Italian art. Shortly before her death she had learned that her friend had been suffering from cerebral symptoms, above all from maddening pains in the head. Death had resulted from a metastasis of carcinoma to the brain. My patient herself had been suffering from pains in the head for the last eight years; this was the reason why she sought my help. Her mother, eight years previously, had also died from cancer of the womb. She had nursed her for two years, and her mother was very exacting and frequently impatient, so that she had often felt that she could hardly continue to nurse her. Once—at the beginning of her mother's illness—she had actually thrown off the yoke, and had made one of

those trips to Italy with her friend. She still reproached herself for having acted so selfishly. The pains in her head began immediately after her mother's death. Since her friend's death she had often wondered whether these pains were not due to a disease of the brain.

At this point the patient became silent—one of those silences which are familiar to the analyst, as signs of a strong resistance. To the urgent admonition to tell everything, she confessed, first of all, that her friend had once told her that one could acquire diseases of the brain and spine through self-abuse. A further resistance. At last she confessed that while she was at boarding-school, but also later, she had often indulged in this "secret vice." Even her feeling of guilt in respect of her mother originated partly from this source; and in part it was derived from her death wish against her mother, allegedly because she had made her father unhappy; but in reality because she had to sacrifice her whole youth to her mother. Her mother had repeatedly spoiled her chances of marriage by her interference, in order not to lose her.

Next day the patient arrived for analysis beaming with joy. "Just think, Doctor," she cried: "Yesterday I found the photograph of my friend which had been missing for so long! And where did I find it? In a portfolio in which I keep all my photographs of Italian works of art."

The patient, having spoken at great length of her Italian journeys during the last few consultations, had felt a longing to refresh her memories of them, so it was quite natural that she should get out her portfolio of Italian photographs and have a good look at them. My question, as to whether she had never done this since her friend's death, seemed to take her aback; yes, sometimes she had taken out one of her portfolios, but, strangely enough, never the one which contained the photograph. This time, however, she had systematically looked through all the portfolios, page after page, so, of course, she was bound to find her photograph. It was now clear even to her that she had at some time cunningly put the photograph aside, apparently in such a way "that the right hand knew not what the left hand did." The sight of her dead friend's face had become intolerable to her, because the portrait always warned her of the fate which, as she feared, would be hers. After she had spoken of her fears during the last consultations, and had recognized their baselessness, and the real connection between them and the secret feeling of guilt, she was rid of the burden which had been oppressing her for years. For the first time she could breathe freely again; the spell was broken, the picture of her friend was no longer a painful warning, and there was no longer any reason to hide her portrait.

(2) *Symptomatic Actions*

The so-called symptomatic actions have many points of similarity to the mistakes which we have been considering. They differ from them, however, in this respect: they are always committed quite unconsciously, and, as it were, in a desultory fashion, so that they do not interfere with the progress of conscious activities.

Thus, Freud, in his lectures, tells us of a female patient, a married lady, who consulted him in respect of nervous troubles. During the

consultation Freud asked her to tell him about her married life. She replied, evasively, that there was not much to tell; she was very happily married. She then described, in detail, the excellent qualities of her husband, and how well they got on together in every respect. At the same time, she kept on turning her wedding ring round and round; finally she drew it from her finger and let it fall. When Freud called her attention to the fact she was greatly embarrassed; soon after this she took her leave of him and never returned. About six months later Freud heard by chance that she was involved in proceedings for divorce.

Here is a second example, which I myself observed:

During the session of a medical society some members of the audience who were sitting beside me called my attention to the curious behavior of a colleague, who kept on boring holes with his pencil in the sheet of paper that was lying before him. After the session I was asked for my opinion as to the significance of this behavior. I replied that only my colleague would be able to explain it, but I doubted whether he would be inclined to do so. One word led to another, and finally it came out that our colleague's wife was in the eighth month of pregnancy, so that marital relations naturally had to be interrupted for a time. Naturally the young husband was somewhat distressed by this enforced abstinence. His symptomatic action was nothing more or less than the symbolic representation of the joys of love of which he was deprived, and which he would not obtain elsewhere, since he was in love with his young wife.

These few examples clearly illustrate the nature of symptomatic actions: They betray the presence of an unconscious tendency which gives the lie to the mask worn in confronting the world. They are therefore most likely to occur when someone is making assertions respecting his present situation which are contradicted by his unconscious. The symptomatic action is then always a symbolic representation of an unconscious tendency to act in a certain way. The lady who played with her wedding ring during the consultation, finally drawing it from her finger and dropping it on the floor, plainly betrayed by this symptomatic action her unconscious intention to dissolve her marriage.

Sixteenth Lecture

(3) Dreams

Ladies and Gentlemen:

In mistakes, and symptomatic actions, we have studied manifestations of the unconscious whose structure is, comparatively speaking, so simple that their interpretation, in the majority of cases, offers no special difficulty, but is often enough so obvious that any witness can perceive it. In dreams, on the other hand, we are confronted with much more complicated structures, whose meaning is seldom immediately apparent. Their interpretation demands, as a rule, a regular analysis, based on all the associations with the nocturnal product of his psyche which the dreamer himself is able to furnish. But here we shall be abundantly rewarded for our pains, since the study of dream structures affords us a profound insight into the structural laws and the *modus operandi* of the unconscious, and is therefore the best preparation for the study of analogous processes in psychoneurotic symptom formation. Freud, the explorer of the unconscious and the creator of dream interpretation, did not exaggerate when he wrote: "The dream is the royal road to the unconscious."

Yet, as you know, even down to the present time objections have constantly been raised by academic psychologists against the scientific value, and indeed against the mere possibility of the psychoanalytic exploration of dreams as a method of interpreting their meaning. It has been said that the apparently meaningless and confused structure of the dream, which often defies all the laws of logical thought, is sufficient evidence that we are dealing merely with fortuitous, valueless, and, as it were, ataxic fragments of the waking mentality—the mere froth on its surface—a view which even the uneducated layman expresses in the drastic verdict: "Dreams are bubbles!" For a long while such "froth" was held to be unworthy of a scientist's serious consideration and the critics derided the efforts

of the psychoanalysts to discover the laws and to trace the systematic development of these creations of the human mind.

Yet such an attitude in respect of dreams is in contradiction to the high esteem in which "dream interpretation" was held among the civilized peoples of antiquity, and in which it is held to this day by uneducated people as a means of predicting the future. Was this, and is this, mere superstition? By no means; for many examples of dream interpretation have been handed down to us from antiquity which cannot be summarily dismissed as superstitious nonsense:

We have famous examples in the dreams of Pharaoh, which Joseph interpreted so correctly for the King of Egypt that he was appointed "ruler over all the land" (Genesis 41, 43). Quite modern in spirit is the interpretation of a dream which was dreamed by Alexander the Great during his victorious advance upon Egypt. After his army had been lying idly for months outside the Phoenician stronghold of Tyre, and all attempts to storm the fortress from the land side had failed, the great general dreamed one night that he had seen a satyr dancing exultantly on his shield. He immediately sent for an interpreter of dreams, who exclaimed: "*Sa Tyros!*" "Thine (shall) Tyre (be)." That very night Alexander commanded that an attack should be made at dawn with all his forces, and the city was conquered.

But in many cases the behavior of the dreamers themselves is utterly inconsistent with the superficial notion that dreams are "merely froth." It is common knowledge that many dreams exert an undeniable influence over the mood of the following day. A dream, even if its meaning remains obscure, may fill us with happiness, or it may depress and discourage us. I can remember many occasions on which the dreamer had experienced a peculiar resistance, apparently arising from the unconscious, against the narration of an apparently perfectly harmless dream—quite apart from the comprehensible resistance against the narration of dreams whose manifest content was of a compromising nature; for of course there are dreams which a husband would not care to relate to his wife! There is even such a thing, we know, as jealousy in respect of the dreams of the beloved.

If we now try to define the dream as a psychic product, we might say: the dream is a psychic activity during sleep which has the character of an hallucination; that is, it presents itself to the consciousness of the dreamer as something actually experienced. The dream contents therefore operate like original observations, and not like

pale recollections—that is, mnemic excitations. The dream hallucinations are mostly visual, but occasionally they are acoustic also, and very often kinesthetic (sensations of hovering, flying, swimming, etc.; also sensations of motor inhibition, of being unable to proceed). But ideas also, and reflections concerning what is experienced, occasionally weave themselves into dreams, and these are mostly of a highly fantastic character. They are distinguished from reflections in the waking state mainly by the fact that they have the emotional tone of absolute certainty. Further characteristics of the dream are the uncritical mood, the defective power of judgment, which allows us calmly to accept the craziest and most contradictory happenings: people who have long been dead appear, and we are not in the least surprised by such anachronism; horrible things happen, but we are unperturbed; or, on the other hand, we are strangely moved by things to which we are indifferent in the waking state. All the affects of our waking life may occur in the dream, but, as we have indicated, they are often quite inadequate to the hallucinatory experiences. All these characteristics the dream shares with the hallucinations of the schizophrenic, so that Freud could truly say: The dream is the hallucinosis of the sane.

Beside nocturnal dreams there are the so-called “day-dreams”; in common with the dreams of sleep, these often have an hallucinatory visual distinctness, but are differentiated from the latter by their ordered succession, and other structural peculiarities, which indicate that they, unlike the dreams of sleep, are located in the preconscious.

Let us now ask ourselves: what is the cause of dreams? Are they really only spontaneously arising, chaotic remnants of our mental activity in the waking state, or are they provoked by sensory stimuli? They can be either: Problems which were engrossing us shortly before we fell asleep often return in dreams while we are asleep, though mostly in a very distorted form. On the other hand, we have an overwhelming amount of evidence—even of an experimental nature—that sensory stimuli proceeding from the internal or external receptors, and unconsciously perceived during sleep, give rise to dreams. We have proof of this in those cases where the sensory stimulus in question finally awakes us, so that we still feel it on waking, and are able to recognize the part it played in the dream.

Hildebrandt has recorded a number of such "arousal dreams," which were all reactions to the sound of an alarm-clock. For example:

"I see a kitchen-maid with some dozens of piled up plates walking along the corridor to the dining room. The porcelain pillars in her arms seem to me in danger of overbalancing. . . . Sure enough, on the threshold she stumbles—the fragile crockery falls clattering and is shattered, and lies scattered in a hundred shards all over the floor. But the endlessly continuing din is not, as I quickly realize, a genuine clatter; it is really a jingling, and this jingling, as the waking sleeper now realizes, only means that the alarm-clock has done its duty."

You see very clearly from this beautiful example how the waking stimulus enters into the dream:

1. The waking stimulus does not occur as such in the dream, but is transformed into another very similar sound; as though the disturbing sound were interpreted in a fantastic manner by the dream-psyche.

2. The result of the dream is that waking does not take place immediately, but is postponed at least for a little while.

Fortunately, not all sleep-disturbing stimuli are so intensive that they are bound to wake the sleeper; hence one does not awake out of all dreams. It is then often difficult, and even impossible, subsequently to identify the stimulus which has provoked the dream.

An example in which this was possible is related by Freud in his *Interpretation of Dreams*. When he was on holiday with his wife in the South Tyrols he dreamed one night: "The Pope is dead." When he related his dream to his wife next morning she said immediately that it was no wonder he had had such a dream; had he not heard the constant ringing of bells that had been sounding since the earliest dawn from all the villages round? It was Corpus Christi day.

But it is not always external sensory stimuli that provoke the dream; internal bodily stimuli, the so-called interoceptive stimuli, can provoke dreams; excitations from the viscera, from the heart, the stomach, the bowels, the bladder; so that there is a certain justification for the popular saying that dreams come from the stomach; also from the genitals, in a state of excitation, from the limbs, when they are "asleep," etc. Thus, Scherner (1861, cited by Freud) tells of a dream in which two ranks of handsome boys stood facing one another on a bridge, alternately attacking and retreating to their original position. The dreamer awoke, violently grinding his teeth. Intestinal colic during sleep may provoke a dream of wandering or forcing one's way through long, narrow, winding passages; while the

desire to urinate gives rise to all sorts of dreams of water: one sees ships¹ sailing by, or is oneself on board a ship, sailing through endless rivers and channels to the sea. All such bodily stimuli are doubtless extremely prone to disturb the sleeper, and finally to wake him. The dream delays waking, guarantees a continuance of sleep, at least for a time, inasmuch as it substitutes something else for the waking stimulus, introduces it into a scene, and even fits it into a complete, progressive incident; in short, it somehow misinterprets it and thereby deprives it of its immediate, urgent character of waking stimulus; breaking off its point, as it were, by this elaboration.

But physiological body-stimuli tell us only which elements are active as dream incitors, and undergo a fantastic translation in the dream; they tell us nothing whatever about the significance of the dream as such, nor do they tell us why the bodily stimulus in question was distorted just so and not otherwise. Obviously we must know this if we are to understand the significance of the dream as a psychic formation. We have here very much the same state of affairs as in the mistakes which we have been considering; just as in the latter case we were able to point to certain external conditions under which mistakes could very easily be committed, so we have learned to distinguish certain external stimulatory conditions which are especially liable to provoke dreams. And just as we could not content ourselves, in the case of mistakes, with indicating the external conditions which provoked the mistakes, and then regard the riddle of the blunder as solved, but went on to ask why just this and no other mistake was made—so, in the case of the dream, we have to ask ourselves this further question: whether its meaning is completely explained by the assertion that it is a kind of guardian of our sleep. And this question is the more justified in that, as we have said, it is by no means the external sensory stimuli, or the internal sensory stimuli alone, that disturb our sleep, but above all psychic excitations, of which we should expect that they would undergo a suitable elaboration in the dream—that is, a representation in the form of plastic images. We are therefore justified in asking for the “meaning” of the dream, and in attempting to interpret it as a psychic construction. In order to do this we must apply the technique of

¹ Hence the vulgar *schiffen* = urinate (English, to pump ship).

psychoanalysis—that is, the method of free association. The best way of doing this is to dissect the dream into its individual incidental elements, and to note the free associations to each fragment of the dream separately. You have already been told that this method is based on a psychobiological law, known as Semon's "law of successive ecphoria," according to which all excitations which have entered the brain in immediate succession combine in the same order to form a successively associated engram complex, and the partial recurrence of a portion of this complex inevitably liberates—ecphorizes—the whole engram complex. Every free association which follows a stimulus-word must therefore necessarily be connected with this word. The association cannot be merely fortuitous. Experience tells us, for example, that even a number does not occur to one "capriciously" or "by chance"; the number which occurs to one at one's behest always proves to be in some way related to and significant for the total situation in which one finds oneself at the moment. Very often it is a date, the date of a year which was an important year in our life, or the like. Chance, at all events in the psychic sphere, is a totally baseless hypothesis.

If we now tackle the dream with the aid of this technique, we find, to begin with, that in connection with many elements of the dream a variety of incidents of the day preceding the dream occur to the dreamer with conspicuous frequency: He may say, for example, "Why, I met this person only yesterday!" or "That reminds me of something that happened to me quite recently!"

Example: A young man related the following dream to me:

"I am attending a dancing class; I am dancing with the girl whom I usually have for a partner. Then it is suddenly as though I had invited her to go to the theater with me. But I have arrived much too late; I am still in the cloakroom when the play has already begun. She is waiting for me. The play is *The Merchant of Venice*. We consider whether we had not better go for a walk or wait for the next interval. I am greatly excited, and I apologize to the girl."

Associations: He had that day been considering whether it would not be the decent thing to invite his partner, with whom he always used to dance when he attended the class, to go to the theater with him some time. *The Merchant of Venice* was produced yesterday; he had actually intended to invite her for this performance, but it collided with the hours of the class. As for arriving too late, it occurred to him that yesterday he had to rush off in order to reach the girl's home in time to take her to the dancing class. He arrived a few minutes after the appointed time, and was afraid she might already have left the house. But she had waited for him, and they arrived in time. He then invited

her to go to the theater with him next Thursday. (Then, after some resistance): he had already gone to the theater once with her, a fortnight ago. Yesterday was the last day of the class; in a fortnight there will be a concluding party.

You see that the dream is really connected with preconscious incidents of the day before, or of some days before the dream; it contains what we call "residues of the day." Very often these residues of the day apply rather to the total situation in which the dreamer finds himself than to definite, individual impressions. You will realize, too, that the manifest dream content is never an exact reproduction of the relevant events of the day; there are always alterations, or at least little displacements and divergences from the reality. This is also the case with all the other associations to the dream which the dreamer produces. In their content they always diverge more or less from the original idea or situation, and often in such a bizarre and extreme fashion that the patient at first rejects them, saying: "That has nothing to do with it," or "That is too stupid, too meaningless," or "That is quite beside the point, quite unimportant"; or, finally, he flatly refuses to divulge the association; he would rather not say what it is; it is really too painful. . . . But, without exception, it is precisely these associations, which are cathected with resistance, that prove to be the most important as regards the interpretation of the dream.

This was so in the case of the young man with the dream of the dancing class; the most important associations, cathected with resistance, he produced last of all, with extreme reluctance. I learned, at last, that he and the girl had been dancing together all through the winter, but that owing to his shyness they had not become more intimate. Also, he had told himself that there was no sense in tying himself up just yet, although she was a very nice girl. For that matter, he had never thought of a subsequent marriage; she was too unlike his ideal; she was not slender enough, not sufficiently refined; also she was not of a very good family. But she was pretty, he could not deny that. It was true that he had seen that she had expected something more of him—an engagement, or something of the sort. Really, he had a bad conscience. That was why he had twice invited her to go to the theater with him, as a sort of "payment by instalment." Not long ago there had been a "love tragedy" in the house in which he was living; a girl who was living in the house had fallen

hopelessly in love with a young fellow, and had "gone mad," so that one day she had to be taken to an asylum. "I am asking myself whether I haven't gone too far with my girl friend!"

You see—our young man's dream not only joins up with the external events of the previous day, but in a sense it represents the free elaboration and distortion of an actual conflict, and at the same time provides, in the form of allusions, a consoling solution to appease the young man's conscience. The latent dream thoughts concealed behind the manifest dream content, in so far as they can be extricated from the matter of the associations, would perhaps be much as follows: "I have more than done my duty by the girl; I have already invited her for the second time to go to the theater with me. That is quite enough, I am really not bound to do anything more. Besides, it would really be too late to begin a love drama (go to the theater) with her now, for that was the last regular dancing class, and the next dance will be the winding up party." He anticipates this final act, like the invitation to the theater, in the dream; so he has done the best he could, has cleared things up, and now he can make excuses—i.e., withdraw. On the other hand, he does not seem to feel too comfortable about this solution; his self-reproach can be seen plainly in his dream. "After all, my treatment of the girl has been a sorry performance; what if she should insist, like Shylock, on her rights?"

We see now that the manifest dream content is only a substitute for something else of which the dreamer is unconscious, both during the dream and afterwards; the manifest dream is a charade, a picture puzzle, behind which the real, latent dream thoughts are hiding. For example, in the dream which has just been interpreted the thought "after all, it is too late to begin a love drama now" is plastically, symbolically represented by the hallucinated incident: "I arrive at the theater too late." You will find good examples of this process in the following:

A young woman dreamed that she had received a letter on black-edged paper from a friend. Her mother was suffering from tuberculosis; she often thought: if only she could die.

A woman dreamed: A man in white clothes gives my husband a blow on the head with a hammer—my husband sinks to the ground, but stands up again; fortunately it has done him no harm. The doctor (the man in white) found yes-

terday that her husband's blood pressure was too high; she was afraid he might suddenly have an apoplectic stroke.

You see, then, that the comparison with a charade is to be taken quite literally; dream thought is differentiated from waking thought by the peculiarity that in it abstract ideas or reflections do not take verbal form, but are translated into a sort of picture language, often in a positively witty fashion, through the literal acceptance of word symbols and allusions which would hardly occur to us in the waking state. Conversely, wit, as we know, makes use of a wholly similar technique, through which it achieves its special effect (Freud).

Before proceeding to discuss the laws of dream thinking, we must be clear in our minds as to the general meaning of the dream. This is seen most clearly in dreams of a perfectly simple structure; namely, in the dreams of children.

An example (from Freud): A little boy was to congratulate his uncle on his birthday and give him a small basket of cherries. He did this very unwillingly, because he would rather have eaten the cherries himself. Next morning, with a radiant expression, he related his dream: "Hermann eaten all the cherries." Or: A boy who had been allowed to make his first voyage on a steamer had refused, weeping, to leave the ship. At night he dreamed that he had been traveling on the steamer all day.

In these cases an essential feature of the dream is absent. There has been no distortion; manifest and latent contents agree and the tendency of the dream is all the more plainly perceptible. The dream evidently fulfills a latent wish of the dreamer; it is an hallucinatory wish-fulfilment. Its physiological function as the guardian of sleep tends in the same direction, for the dream satisfies the need to continue sleeping.

In civilized adults such undistorted dreams occur only under special conditions: that is, when a physiological need has become quite overpowering and urgent. Thus, Sven Hedin relates in one of his books that while he was crossing the Gobi Desert, when he and his caravan suffered for days on end from the most terrible thirst, he had dreamed, night after night, of lovely oases with cool springs, or of the cold mountain brooks of his home. The so-called "pollution dreams" also belong to this category, inasmuch as here the sexual desire irrupts into the dream in an undistorted form, though frequently in the form of a regressive resuscitation of earlier strata of experience.

We may add that the day dreams which we mentioned at the beginning of this lecture are always avowedly wish-fantasies.

We might finally represent the function of the dream in the following terms:

- I. The dream, like the mistake, proceeds from two opposing tendencies:
 1. From a function which is disturbed and therefore has the tendency to suppress the disturbance. This tendency can only be the wish to go on sleeping.
 2. From a disturbing interference. This may be
 - a) a physical waking stimulus,
 - b) a psychic disturbing stimulus, corresponding with an unconscious instinctual impulse, either a primordial impulse (an unsatisfied longing or desire) or the impulse of a secondary instinct (a moral impulse).
- II. The dream deals with this sleep-disturbing stimulus by means of a compromise: it cannot dismiss the stimulus, cannot do away with it—but it can alter it in a fantastic fashion, so that the sleeper experiences its hallucinatory satisfaction and is able to go on sleeping. But this is now only a partial sleep, since the consciousness is no longer completely asleep. Both the mutually incompatible instinctual demands—the wish to go on sleeping, and the disturbing instinctual demand—have thus to some extent had their way, and have also to some extent eliminated each other.

Now, we have seen that the dream, in this process of making the sleep-disturbing stimuli innocuous, in the so-called dream-work, as Freud has designated it, usually, but not always, proceeds to distort the unsatisfied instinctual desires, and in doing so it makes use of a peculiar, witty technique; namely, the pictorial representation of the processes in question; in other words, a kind of charade. Consequently, it generally requires a laborious interpretation, which not infrequently meets with considerable resistance on the part of the dreamer, to discover, behind the manifest dream content, the latent "dream thoughts" which have arisen from the unconscious. As a further problem, we have now to ascertain, on the one hand, the

causes of the dream distortion, and on the other hand, the laws which condition this distortion.

Here it will be more practical to begin once more with the simple circumstances of the so-called arousal dream and the undistorted dreams of children. As regards the physiological arousal dreams the facts appear to be clear enough; if they were to irrupt into the sleeper's consciousness in their original undistorted form they would result in his immediate waking. On the other hand, it is necessary that he should wake in the end. If one were simply to ignore the alarm-clock by cutting out the auditory centers, and were to go on quietly sleeping, one would afterwards find oneself in serious difficulties; for example, one would miss one's train, and arrive at the office too late, or be late for school. Between these two requirements a compromise is formed; the sleeper must and will be awakened finally, but not with the startling suddenness that we sometimes experience as a result of exceptional stimuli of this kind, so that we speak of "waking with a start." The compromise formation of the short arousal dream spares us this nervous shock. This obtains also for the arousal dreams evoked by all sorts of bodily stimuli; at least, in so far as they are of an urgent nature. For example, if one did not wake in spite of an urgent need to urinate one might easily wet one's bed, a most embarrassing catastrophe for a growing child, to say nothing of an adult. Here, as everywhere when the superego is involved, the unconscious is not free to have its own way; but a compromise between the need of sleep and the arousal stimulus has to be effected, whereby the conditions of dream distortion occur.

Dream distortion thus appears above all as the work of the censorship, which we discussed in the last chapter. But it is due also to a second cause, of which we shall speak directly.

Matters are quite different in the case of children's dreams, and in the comparatively rare dreams of adults of which pollution dreams and the dreams of explorers travelling in the desert were given as examples. In children's dreams the distortion is lacking, because the censorship does not yet exist; it first develops in conjunction with the formation of the superego. As for the undistorted dreams of adults—including sexual dreams—they all have one thing in common: they are evoked by an urgent bodily need which has become extreme and is completely justified; a need whose satisfac-

tion, at all events in normal individuals, cannot result in an appreciable collision with the superego. Here there is no need to bring the censorship into operation, and so the most essential reason for the dream distortion, the conflict with the superego, is absent. The "dream-work," in these undistorted dreams, really consists merely in the production of the hallucination: that is, in the transformation of the wishful ideas into plastic images. For example, instead of the wishful thought, "Now I should like for once to eat and drink to my heart's content," the hallucination appears: "I am eating and drinking at a table loaded with good things." Here the unconscious makes an uninhibited irruption, in the only possible and adequate form of its psychic expression.

We shall see now what is the origin of the distortion of the wishful impulse and its hallucinatory gratification in the great majority of all other dreams. We have already cited a very instructive example: the young girl who dreamed she had received from a friend a letter on black-edged paper. You remember that the associations of the dream pointed to the ailing mother. Some years previously the mother had spent a long time in Davos on account of pulmonary tuberculosis, and ever after she had been in very poor health. Now, whenever she heard her mother cough, the daughter tortured herself with the thought that she might have a relapse, which would be fatal. The girl was suffering from a very severe obsessional neurosis. Analysis revealed the fact that since early childhood she had been suffering from a severe, unresolved Oedipus complex; that is, she was unconsciously in love with her father, and accordingly felt that her mother was her rival. Her obsessive anxiety in respect of her mother's health merely proved to be a disguise concealing an intense hatred, which in her childhood had been expressed in conscious wishes that her mother would die. These death wishes were afterwards repressed, but constantly liberated the compensatory obsessive anxiety; in order to exorcise this anxiety the patient constantly felt compelled to perform a whole series of complicated obsessional actions. If these compulsive ceremonies were neglected only once her mother would be bound to die. We shall return to a further consideration of this interesting case when we come to discuss the nature of obsessional neurosis.

You see, then, that in the case of this patient, in the waking state—

in neurosis—the unconscious death wishes could express themselves only in distorted form: namely, in the antithetical form of an obsessive anxiety, an obsessive fear that the mother might die. We see the same mechanism in dreams: this immoral and forbidden wish could assert itself only in a disguised form; it appears only as a delicate allusion—a letter on black-edged paper. We generally can make the same observation everywhere: whenever we analyze such distorted dreams—and the majority of dreams do actually present such distortions—by means of the method of the dreamer's free associations, and so make the distortion retrogressive—retranslating it, as it were—we find almost invariably that the meaning of the dream represents the gratification of a prohibited wishful impulse which would be indignantly rejected by the dreamer's waking consciousness as scandalous and immoral. In other words: The dream distortion to a great extent corresponds to the moral aversion which the dreamer would feel in the waking state, if he could become aware of these repressed, obnoxious desires; it is the work of the censorship which is able to exercise its function to a considerable extent even during sleep which reduces the state of consciousness and more or less facilitates the irruption of unconscious tendencies.

As to the means employed we might compare the dream censorship in every respect with the political press censorship as it is exercised in wartime or in despotically governed countries. In these countries or in times of war, obnoxious passages are crossed through or blacked out, so that they appear in the newspaper as white, unprinted surfaces. In the same way, the most obnoxious passages in the dream are often especially shadowy, indistinct, confused and blurred. Persons who are quite indistinct, and who impress the dreamer as absolute strangers, constantly prove on analysis to be persons who are most closely related to the dreamer. One is reminded of the anonymous allusions in the Press: "We could give names, but refrain from doing so," or "a distinguished personality, whose name we will not mention," and the like. Even the employment of initials instead of names, or of pseudonyms, has its parallel in the dream—as when a dream figure usurps the mask (the face, clothing or demeanor) of another, harmless person, or suddenly, at a decisive moment, changes into another person. The "dream editor" in this case may be said to forestall the censorship. Also the

displacement of emphasis which is such a favorite expedient of the political press is abundantly practiced in the dream. For example, as in reporting the vicissitudes of war, the defeats are said to be unimportant, or they are not mentioned at all if the tide has turned against our own arms; however, the smallest successes, perhaps even those won on another front, are immoderately exaggerated. We find the same mechanism in the dream where the affective accent is often transferred from the essential to some insignificant detail. Think once more of the "letter on black-edged paper." Here a superficial trifle is employed to represent such a decisive event as the death of one's mother. Freud very rightly speaks of "representation by a detail of the most trivial kind." The displacement can also take the form of a regrouping or rearrangement of the materials, resulting in the dream becoming even more obscure. This rearrangement is one of the chief means of dream distortion; it is this more than anything else that gives the manifest dream content such an alien character that the dreamer himself cannot accept it as the product of his own mind, but says: "The dream came to me."

The dream censorship shows us that there is in the dreamer himself a strong resistance against the unconscious, instinctual tendencies which in the dream are manifested as hallucinated wish fulfilments; the product of this resistance is, of course, the dream distortion. When we attempt to interpret the dream, we meet with the same resistance which takes the form of the patient resisting analysis. Either the patient is unwilling to communicate his associations, or he dismisses them as "entirely unimportant, silly, irrelevant," etc.; he often declines to accept the interpretation, even when it is perfectly obvious on the basis of the material obtained.

Here the same psychic structure offers resistance which, as the so-called "dream censorship," had effected the extensive distortion of the dream thoughts by the means already described, thereby preventing them from finding their way into the dream consciousness in an unaltered form. For these unconscious tendencies, when brought to the light of consciousness by analysis, nearly always prove to be of such an immoral character that the dreamer's conscious ego rejects them with disgust. In every respect—ethical, aesthetic, social and religious—he condemns these ideas as utterly revolting and reprehensible; they are things of which in the waking state one would hardly

dare to think, or of which one would think only with aversion. Above all, these prohibited and therefore repressed dream wishes are inspired by a limitless egoism—an egoism which strides callously over corpses, lusts after forbidden pleasures, and enjoys them in hallucinatory fashion. Hatred, death wishes, longings for revenge, even against beloved persons—one's parents, one's own children, one's husband or wife; perverse sexual impulses, in particular incestuous desires in respect of one's own mother, father, brothers, or sisters; impulses whose gratification is condemned by all the peoples of the globe as a crime deserving capital punishment—all these impulses are accepted in the dream as a matter of course.

Here again I can hear you object: When such tendencies are interpreted the dreamer will not admit to them; he almost invariably refuses to acknowledge them as wishes which he actually harbors. He or she loves his wife, or her husband, devotedly; the elder brother loves the younger; the young mother loves her children above everything in the world, and she would die if she lost them. But the apparent contradiction is easily explained. In all such cases it can be shown that at some time, at an earlier period of his life, he was very near entertaining such feelings and was even conscious of them. This holds good even for the gross instance of the young mother who dreams, in a distorted form, of the death of her beloved child. Think, in such cases, of the frequent death wishes directed against the unborn child, when pregnancy prevents the young wife from enjoying life, and is felt to be inconvenient, especially if unconfessed feelings of aversion for the husband, or economic worries, are involved.

But again you may ask: These death wishes belonged to a long vanished past, when entirely different circumstances prevailed. Why, then, are these impulses, which long ago must have become faded and affectless, which no longer have any actuality, nevertheless reactivated in the dream? This objection is easily met. Any occasion, however trivial, suffices to re-awaken the old, long faded and repressed affects in the unconscious. Suppose, for example, that on the day before the dream the young woman had for some reason been extremely annoyed with her husband, and had quarrelled with him. In the unconscious this is a sufficient occasion for the thought: if it were not for my child there would be nothing to prevent a divorce, and I should be rid of him! This idea could never establish

itself in the waking consciousness, because her present love for her child, and the consciousness of all that she had in common with her husband, in spite of all trifling differences, far exceeds her trivial annoyance in affective strength. But in the unconscious this annoyance can develop to the most extreme degree, owing to the characteristics of this deep stratum. In the unconscious the greatest contradictions can exist, side by side, without compromise, without disturbing each other, on account of the isolation of the individual complexes, and their lack of any mutual relations. You have already learned that the poverty and even the absence of associative relations to reality, and to the total personality, are one of the principal qualities of the unconscious complexes.

A third objection which is constantly raised against the alleged "immorality of dreams" insists that it is after all improbable that evil should be allotted so much scope in the human make-up. But please remember that all these horrible things are actually done every day—are committed as crimes by waking human beings. Plato was right when he said: "The good are those who content themselves with dreaming of what the wicked actually do." Moreover, you should reflect that all these evil desires exist in every one of us, at some time or other, in our ontogenetic prehistory—namely, in childhood—and are not only active, but even extremely effective—so effective, indeed, that one has, as you very well know, to keep the most careful watch over very young children, in respect of their mutual relations, in order to avoid disaster. Nowhere does limitless egoism express itself as in the nursery, during the first few years of life; it has to be restrained constantly by educative measures, and is tamed in some degree only by the building up of the superego. In earlier lectures we described at some length the polymorphous-perverse pregenital sexual organization of the very young child, and you were told that at this stage the child not only gives open expression to its death wishes regarding its brothers and sisters, but even makes attempts upon their lives, and that in a somewhat later phase incestuous attacks are made upon them. You can imagine, then, that in dreams, where the infantile unconscious, owing to the weakening of the ego, reaches the more superficial strata of the conscious, the recollections of our earliest childhood are always at our disposal—that is, they can easily achieve ecphoria—while the waking ego op-

poses almost insuperable obstacles to the ecphorization of these repressed complexes. The same conditions obtain in the psychoses, and the comparison of dreams with the hallucinations and delusions of mental patients—even in respect of their asocial and anti-social tendencies—reveals more than a mere similarity; an actual analogy exists, even in respect of content. In conclusion, consider the phylogenetic prehistory of man; when, perhaps in the age of the cave dwellers, or probably at a still earlier stage, the stronger simply killed the weaker and took his wife and the rest of his property whenever it suited him.

✓ In its content, therefore, the dream is a regression to an infantile stage of development, a return to archaic methods of feeling and thinking; in short, a regression to the phylo- and ontogenetic past in the evolution of the individual and the human race. But it is regressive not only in its content; the same regression manifests itself in the form of dream thoughts. If we examine this form more closely, we realize that it exhibits all the features of archaic, unconscious, prelogical thought, such as anthropologists like Lévy-Bruhl, Winthuis, Roheim and others, have described as characteristic of the primitive races of mankind, whose culture, in its essentials, has remained at the developmental stage of the Stone Age, and whose traces we can still distinguish in many of the intellectual productions of so-called “civilized” peoples, as in myth, fairy tale and folklore.

In order to realize this fully, we must once more return to the means which the dream work employs in changing the “latent dream thoughts” into the “manifest dream content”; in short, in affecting the dream-distortion. We have already briefly mentioned those methods of dream distortion which appear to owe their origin to the dream censorship. But it can easily be established that the form of dream thinking, even when the “censorship” is barely operative, or when its intervention can hardly be assumed, differs from the form of our waking thought in a regular manner, and as we have described. In other words: The structure of dream thinking is determined not by the censorship of the superego alone, but corresponds to the structure of archaic, unconscious thinking in general, which, as you heard in the fourteenth lecture, is “symbolic-sexual, identificatory, animistically personifying, participative and collectivistic

thinking." Whenever we dream—that is, whenever the unconscious invades the superficial strata of our consciousness—our thinking, quite apart from its content, is bound to follow the forms of archaic thinking, as the only possible forms in which the unconscious can express itself (F. Mayer).

We therefore almost invariably find in the dream the following peculiar forms of thought (amongst others):

1. *Condensation*, which we have already discussed in connection with mistakes; you will remember the example of the "*Vorschwein*." Condensation occurs when elements which have something in common are welded into a single construction. For example, mixed personalities often make their appearance in dreams; they are composites of several different persons, having borrowed this quality from one, and that from another. In this way figures are created which have a certain kinship with the fabulous beings of mythology, who indeed derive their origin from the same identificatory thinking. But curious neologisms may arise in this way, because a whole number of different latent dream thoughts may be expressed by one single composite word, being as it were condensed in it. A good example of such a creation of neologisms in a dream (which has its parallel in the so-called verbigeration, the "word salad" of certain schizophrenics) occurs in the following:

One day I examined a young female patient by means of the Rorschach test, in order to clear up certain diagnostic doubts which had occurred to me in the course of the treatment. Next day she related the following dream:

"I am lying on my stomach, and sleeping. You come in and explain to me something about my backbone, and say something in Latin. As you do so you alternately touch my spine and another part of my body—that is, the side of my body—and as you do so you ask: What is that? At last you said: From now onwards I shall treat you *kontruinisch*!" Her associations to this curious composite word were:

1. *Kontinuierlich* (continually): I am to continue to treat her. She was startled when I applied the Rorschach test, and immediately thought: That's the end. Now, in consequence of the result, he will give up the analysis! She had heard, at some time or other, that this psychodiagnostic experiment was made in order to obtain certain essential data which would tell the analyst whether a psycho-analytic treatment was likely to be successful.

2. *Klinisch* (clinical): that is, bodily, in contrast to the purely psychological treatment hitherto applied. In the dream I apply physical manipulations, and she subsequently confesses that they caused her intense pleasure.

3. *Contraire*: the contrary of the purely psychological treatment hitherto ap-

plied; that is, once again, a clinical treatment, such as she experienced in the dream.

4. Kongruent: that is, in accordance with her wishes.

This curious composite word was thus shown to be a really ingenious condensation, by which a number of disparate ideas were completely expressed "in one word." One says, in such cases, that the dream, or the relevant passage of the dream, is "overdetermined." We shall have to consider this *overdetermination* in the case of psychoneurotic symptoms.

2. But the converse process may occur: namely, a single dream thought may be represented by several disparate dream images; we then speak of *disjunction*. Such disjunctions occur particularly when a person's psychic conflict is expressed and represented in the dream. The dreamer then appears to himself in a twofold form: he sees himself acting in a more or less transparent disguise, and at the same time he is present as an onlooker in the person of his other ego. This process, by which a single latent dream element is distributed among several simultaneous manifest dream images, is described as *confluence*. For example: a single dream picture, or one and the same event in the dream, simultaneously represents a definite attitude towards an impulsive demand and the counter attitude, the warning or penalty. Here is an example of such a dream, in which a definite idea was represented by two disparate events:

A patient dreamed: "I was looking for the Semori (contraceptive tablets) in order to go with my wife. When I found them, I accidentally shook them all out (*ausschütten*) of the glass tube before my wife's eyes (so he made a mistake in the dream!). I quickly try to pick them up (*auflesen*) but as I am doing so I feel dizzy (*schwindlig*). Then I suddenly realize that I have diarrhea and have badly soiled (*beschissen*) my shirt. But she has noticed nothing."

Associations: "This *Schwindeln*² (sic!—a mistake which he did not notice, but to which I immediately called his attention)—this dizziness I felt suddenly yesterday evening when I was thinking, today would be a good time to have intercourse with my wife, as it is the first day after her period. But when I felt this dizziness I thought perhaps it would be best to wait until I was better. Incidentally, recently I again left my rubber shoes at your office—my 'insulating material' (= Semori tablets). To emptying the tablets *Verschüttung*³ (abortion) occurs to me. Tomorrow my wife goes away for three weeks' vacation. It's to be hoped I shall have no *Grubenunglück* (mining accident = sexual infidelity).

² *Schwindel* means dizziness; whereas *schwindeln* means "to swindle, cheat, defraud."

³ The German *Verschüttung* means being buried with debris. The verb *verschütten* also means to spill.

I then thought of carrying the Semori tablets on me, in order to have them at hand if an opportunity arises. But then I told myself: My wife might notice it later if a tablet were missing. I also reflected that I might pick up (*auflesen*) a sexual disease."

The mistake in the dream signifies a self-betrayal of his sexual infidelity, which is represented by two elements in the dream. He had cheated (*beschwindelt*) and defiled (*beschissen*) his wife. But then, after all, everything passed off all right: she had not noticed anything.

3. The *displacement of emphasis* was mentioned in our discussion of the operation of the censorship; it corresponds to the analogous processes in the cultural life of primitive peoples (cf. Lecture 14, p. 281). Here is another example, in the dream of a married female patient:

"I am walking with my husband in X (her native town). It is sunset. Suddenly I have lost him. I ask the pastor (who had confirmed and married the patient) whether he has seen him. He says, yes, he saw him climbing up the mountain with a friend. I am inconsolable, and cry loudly. . . . Suddenly I see a great powerful aeroplane, which is in danger of falling. But as it falls it changes into a statue of Venus, bigger than life, which glides quite gently down on to the turf and then stands there as a wonderful monument. It is wonderfully beautiful!"

Associations: In a fortnight from now her husband will start on a six weeks' holiday cruise in the Mediterranean. He bought the tickets yesterday. She holidayed with him once again: Don't make any journeys by aeroplane! He is passionately fond of flying. The pilots, in these South-Eastern countries, are not very reliable. Some days before this she had read in the newspaper of a disaster to a passenger plane (*Verkehrsflugzeug*⁴). Fallen airmen are generally commemorated by a monument. The day before yesterday her husband told a friend who was staying with them that he ought to accompany him on the trip; but the friend replied that unfortunately that was impossible, and he added that his wife would never let him make such a long journey alone—she was much too jealous. Then, thoughtfully: "But am not I perhaps jealous? Was I afraid that my husband might make excursions—extra trips—while he was travelling? On the contrary: in this respect I trust my husband absolutely! . . . Venus is the Goddess of Love. . . ." (She becomes still more thoughtful). "If he did anything of that sort while he was travelling he could easily bring back a *Denkzettel* (memorandum, also punishment) (*Denkmal* = memorial), a venereal infection. In these countries, of course, all the women are diseased. The friend who was climbing with my husband in the dream (a symbol of the sexual act) was Mr. Z., an old fellow student of his—also an engineer—a technician, like the visitor the day before yesterday whom he invited to accompany him on his journey. This Z. was said to have led a very gay life in his youth,

⁴ *Verkehr* = intercourse.

and to have had many gallant adventures. The pastor confirmed me, and he married me too. . . . Now I come to you for "instruction." . . . (She is greatly embarrassed, is silent for some minutes, and then): "Yes, that is it! Recently I have often thought that I should really be far from objecting if my husband would sometimes have to come down off his pedestal (lit. "his lofty height,") for once—if he were sometime to make a slip and have to pay for it. Then he could not reproach me with my failings, and we should be quits; I could forgive him and my own offense would be atoned for." (Before marriage she had had an affair with a man which she had kept a secret from her husband during her engagement, and for a long while during her married life. Now that he knows of it he often "rides the high horse," morally, if she has neurotic attacks.) During the next analytic hours she related some very insidious transference dreams; she had become conscious that she had been indulging in secret fantasies, to the effect that during her husband's absence she might have a love affair with the analyst. In the "monument" of the Goddess of Love, on which the entire positive affect of the dream was finally concentrated ("it was lovely!") a whole series of partly antithetical, repressed wish fantasies were condensed!

4. The *plastic, pictorial representation* of the unconscious dream thoughts requires one important supplement. . . . We have seen that it is effected after the fashion of a picture puzzle, a charade, inasmuch as verbal expressions are taken literally although they have long ago lost their concrete, sensory meaning for our waking consciousness. We have the same process in early childhood: the young child accepts all such verbal formations quite literally and understands them in their original pictorial meaning; the child, like the savage, thinks in a perfectly concrete manner, in concrete images.

Example: When my little son was three years old, he was paying a visit to his grandmother, and as always, had amused himself by playing, all the afternoon. Now it was time for him to return home. The youngster objected vigorously, and struggled as his outdoor clothes were being put on, when by a sudden movement he struck his head violently against the back of a chair. He was told: That is the punishment for your unruliness! The child replied, weeping: "I have knocked my head on the punishment!" Since then, to the amusement of the family, he describes every back of a chair as a "punishment," and this in all seriousness!

After all that you have heard concerning the structural laws of the unconscious, it will not surprise you that in the dream, when a regressive resuscitation of the experience strata of early childhood takes place, the thought also assumes the infantile and archaic forms of that period; and that abstract ideas do not occur in the dream, but are expressed by concrete, plastic images.

Among the plastic, pictorial means of expression of dream think-

ing we find, in addition to the charade, and above all, *symbolism*; and this dream symbolism, like the symbolism of the Gunantunas, of which Winthuis has told us, is above all a sexual symbolism. These mainly sexual dream symbols are distinguished from the plastic, charade-like mode of representation by the fact that they are general—that is, they occur to all human beings of a certain cultural stratum—and even far beyond that stratum—they are unconsciously employed in exactly the same stereotyped manner to denote the same things. One could really make a universally valid lexicon of dream symbols! Above all, the human body and its activities are represented by symbols; but also parents, brothers and sisters, and such fundamental vital processes as the act of procreation, birth, and death. The human body appears as a house (just as in student slang a former semester is described as an “old house,” to which one can possibly give “one on the roof”). The woman often appears in the form of a room (*Zimmer: pars pro toto: “Frauenzimmer,”* woman!). The parents appear as “king and queen,” as in fairy tales, and young children as worms (poor little worm!), while brothers and sisters are often disdainfully characterized as vermin.

Above all, dream symbolism is inexhaustible in the denotation of the male and female sexual organs and the different sexual activities; and the symbols are entirely in correspondence with those of the Gunantunas, except that among the civilized peoples a few modern symbols have been added, such as the aeroplane, the motor-car, and machinery generally.

Death is symbolized by departing on a journey (think of “the bourne from which no traveller returns”), while birth is represented by “coming out of the water.” [cf. the legend of Moses who is taken from the Nile in a basket by Pharaoh’s daughter—perhaps a transparent allusion to the fact that Moses was really a natural son of the king’s daughter (Freud).]

The meaning of dream symbols can be elicited without difficulty from comparative ethnology, and from comparison with similar formations in the poetry, the plastic arts, the myths, the fairy tales and folklore of all peoples and ages, so that today the relevant facts can no longer be disputed.

5. After what has been said as to the origins of the dream in the prelogical, infantile unconscious, it is obvious that *logical relations*

are absent in the dream; that causal connections, motivations, genuine formations of judgments and criticisms do not occur in it. In the dream, therefore, there is neither a definite Yes nor a clearly recognizable No; the affirmation and denial of one and the same event are represented in the dream simply by two different, consecutive scenes, without any transition, which replace the "or" by an "and." What is more, contraries, as we have seen, can be represented by one and the same element, which can equally well represent a given thing or its direct opposite. For that matter, language contains certain words of which the same thing may be said—words which can actually mean both a thing and its direct opposite: For example, the Latin word "*altus*" means "high" as well as "deep"; "*sacer*" means "holy" as well as "accursed." It is always the primitive words of a language that have this quality of meaning also their contrary (Abel, cit. from Freud). A brief prelude or introductory fragment, preceding a longer dream, often contains the motivation of the latter, in a sense it states the problem; or it contains, by anticipation, "the moral of the story," from which, once more, the complete absence of logical relations is evident. Temporal succession has no place in the dream; indeed, there may even be a complete reversal of the actual temporal succession of events, so that a confusion arises which makes the dream still more opaque. Particularly absurd dreams, which even in the dream are often recognized and condemned as nonsensical and contradictory, frequently serve to represent the abstract idea "But that is nonsense!" Dreams of the same night are connected by their content: that is, they usually treat the same theme from different standpoints; for example, once from the standpoint of the instinctual wish and once from that of morality.

Lastly, it is significant that not all the elements of a dream come from the same stratum of consciousness. Felix Mayer has called our attention to the fact that in the deepest layers of the unconscious there are no verbal expressions, and the action is often curiously uncertain and defective in the elements of movements. Accordingly, in the deepest strata of the unconscious and of the dream we find aphasia and apraxia (as they exist, of course, physiologically, in earliest childhood); whereas dreams in which there is a great deal of conversation, and in which things are clearly expressed, while

speeches are made, and the individual scenes display a fairly orderly succession, derive from more superficial strata, which already belong to the preconscious, and in which a more or less extensive *secondary elaboration* of the original dream content has been effected.

In conclusion, we must deal briefly with the objection so frequently raised against the contention that the dream represents a *wish fulfilment*. This objection is based on the undeniable fact that we do not have only pleasant dreams; there are also very painful, unpleasant, terrifying dreams; in short, anxiety dreams. Where is the instinctual desire and the wish fulfilment in such dreams? Well, it is true that we do not usually find them in anxiety dreams, but you will already have guessed why the wish fulfilment is lacking here: The anxiety dreams are in a certain sense unsuccessful or abortive dreams, in which the dream function of making the disturbing stimuli innocuous and enabling the dreamer to go on sleeping failed to operate. This, of course, is the reason why anxiety dreams always end by waking the dreamer with a start. The dream function fails here because in these dreams an excessively strong instinctual desire is opposed by an equally strong pressure from the side of the moral superego; the ego reacts to this violent collision with acute anxiety; no further compromise formation is possible, and one starts out of one's sleep in perspiration, with violent palpitation of the heart, and other physical symptoms of anxiety. Is Freud's theory of the dream, which has been thoroughly expounded in this lecture, "refuted" by the occurrence of anxiety dreams? By no means; on the contrary, it would be strange if so complicated a psychic performance as the dream formation, a performance which is effected without any cooperation on the part of the consciousness, were always to be perfectly successful.

C. THE FORMATION AND THE ACTIVATION OF SYMPTOMS IN THE PSYCHONEUROSES

Seventeenth Lecture

Symptom Formation in Hysteria

Ladies and Gentlemen:

In the last few lectures we apparently wandered far from our actual theme, the general theory of the neuroses. From the wording of this theme, you would have been justified in expecting that after discussing the organic factors in the neuroses, including the problems of heredity, we should then proceed to consider the causes and seek an explanation of the symptom formation in the psychoneuroses. Instead of this we devoted many hours to general biological inquiries which apparently had very little connection with the subject. We undertook inquiries into the general biology of the instinctual life; studied instinctual conflicts, and even reflex antagonisms, in animals, particularly in insects; we then proceeded to investigate such apparently irrelevant phenomena as we encounter, in the "psychopathology of everyday life," in mistakes, in symptomatic actions, and in dreams. But you will admit that when we had completed this long digression we had obtained some instructive glimpses into the workshop of that mysterious unconscious from whose depths the symptoms of the psychoneuroses emerge on the surface of the consciousness, as strange manifestations of violent psychic conflicts which are at first incomprehensible to waking thought. To come to the point: The processes which are at work, in the instinctual conflicts of higher and lower forms of animal life, in the collisions of incompatible reflexes, and in mistakes, symptomatic actions, and dreams—these laws apply equally to the unconscious instinctual conflicts from which nervous patients suffer. And the peculiarities of the unconscious which we have perceived, for example, in the latent dream thoughts, constitute the laws and the structure of the unconscious.

Moreover, on closer analysis we find in the psychoneurotic symptoms all those pathological processes which we have noted in the collision of physiological reflexes, in the instinctual conflicts of the lower animals, in mistakes, and in dreams: The psychoneurotic symptoms are subject to precisely the same laws and are the result of precisely the same dynamic processes as those simpler manifestations of instinctual conflicts which we have investigated so thoroughly in the last few lectures. It will now be our task to illustrate this in detail.

We will therefore plunge *in medias res*, and investigate, to begin with, in an actual case, the mechanism of the formation of a hysterical symptom. For this purpose we will choose, as an example, a hysterical pain in the knees.

The patient was a bank clerk, twenty-nine years of age, married, who since his marriage three years ago had suffered from sudden attacks of violent pain in both knees, for which no organic reason could be discovered. (The patient had repeatedly consulted specialists, who always agreed in describing the pains as "purely nervous.") The trouble had begun three and a half years earlier with pains in the pelvis, the pains in the knees beginning only after his marriage. Since his illness he had been suffering also from severe hypochondria, which took the form of sudden crises of anxiety. After such *kakoncrisis* (von Monakow) he generally went to see a doctor, if possible a professor, in order to be thoroughly examined and reassured.

Closer inquiry elicited, in the course of the first consultation, a few significant data which helped to explain the genesis of certain symptoms of this neurosis, which could be recognized as a combination of a chronic anxiety neurosis with hysterical features; that is, a so-called anxiety hysteria. I learned first that the patient's father was a drinker, and that the son—he was the eldest of five children—had witnessed, in early childhood, violent quarrels between his parents. He had married only after long hesitation, severe internal conflicts, and an engagement of two and a half years. The principal conscious reason for this irresolute behavior, which contrasted strangely with the lover's insistence on the earliest possible union, as described in novels, was a severe masturbation complex, which was still present in almost undiminished strength: Seduced by a schoolmate, he had begun masturbation while at the junior high school, and had then masturbated very frequently for several years. Four years before he came to me he had heard, at a lecture by a "Naturopath," that masturbation was the principal cause of spinal consumption. The patient had then been engaged for two years and was on the point of marriage. The threat made an all the deeper and more lasting impression on him in that shortly afterwards he found the statement confirmed "in black and white" in a popular medical pamphlet which he had promptly purchased. Now the neurosis broke out, at first with pains in the back. He hesitated to marry, fearing that he might prove impotent, and when he finally did resolve to marry, it was, so to speak, as his last hope of escaping "the onanism devil," as he called it, and perhaps the fate that threatened him. But the anxiety was deeply rooted; amongst other

things, it induced him from the beginning of his marriage to practice coitus interruptus, lest he should beget weak and incapable children, whom he would be unable, later on, to support and educate as he would be suffering from spinal consumption. The result was naturally the outbreak of anxiety neurosis, especially as he also suffered from ejaculatio praecox, whereby his orgiastic potency was considerably diminished, and the disproportion between libido-frustration and libido-discharge was further increased. As a rule the attack of anxiety followed immediately upon the unsatisfying coitus, or on the following day he felt an acute increase of all his nervous troubles. Since his marriage a new symptom had made its appearance, the already mentioned pain in the knees, which sometimes continued for hours and made walking a torture. Of course, he had immediately consulted the popular medical work in respect of his pains, and found that they were the dreaded shooting pains of spinal tuberculosis.

After what has been said you will have no difficulty in relating the patient's pains in the back and knees to his constant dread of spinal consumption, and you will perhaps think that thereby the symptomatology of this anxiety hysteria is already completely explained. But this is by no means the case. Although on the first consultation the patient furnished these simple connections, partly in spontaneous associations and partly in reply to occasional questions, and had learned from me the immediate causal relations between his hypochondriacal fears and his symptoms (dread of tabes evokes "tabetic symptoms")—despite this explanation, the symptoms had by no means disappeared. Five days later the patient came to see me again, because the day before he had again had a violent attack of pain in the knees and back, with a subsequent anxiety crisis. The causes of his symptoms must therefore lie deeper. It was possible, in a brief analysis, to elucidate these deeper connections quite thoroughly, and I should like to describe them for you, at least as regards one symptom which had recently been conspicuously in the foreground. This symptom was the curious pain in the knees.

A closer investigation elicited the fact that these pains came whenever the patient had a conflict, a quarrel with his wife; but, curiously enough, also after each intercourse with her. He had not married his wife out of love, but to a certain extent "*par dépit amoureux*," in order to forget another girl, whom he was unable to marry "for external reasons"—allegedly because his parents opposed a categorical veto to the match. He now spoke at length of this earlier love (with whom he had never had sexual relations; she was "too far above him" for that); he began, without intending it, to speak of her with enthusiasm, and felt conscience-stricken because he had done so; but he kept on declaring that this love affair was "over and done with" long ago as far as he was con-

cerned. The girl had dark hair and a golden-brown complexion like his sister and his mother; he could tell her everything; she understood him thoroughly. She was, as he observed incidentally, nine years older than he. His present wife is fair, and she never had for him the irresistible charm of his first love. As he spoke he was deeply moved, and at last he actually burst into tears, although he had just assured me that he had long ago forgotten his first love. Then he observed that already as a boy he had always fallen in love with girls with a golden-brown complexion and dark hair; from the third to the sixth form he had been in love with a very pretty black-haired girl, and later, when at the secondary school, he had fallen in love with an Italian girl. During the next consultation he told me that he had again had his terrible knee pains in the night, and an attack of anxiety. He had waked out of a dream during the night in a state of acute anxiety; in the dream his younger brother's fiancée, his prospective sister-in-law, who strikingly resembled his first love and his sister, had appeared to him in a very questionable situation. He twice made a verbal slip, saying "my brother-in-law" instead of "my brother." To the question: who would your wife be if your brother were your brother-in-law? he replied, after reflecting for a moment: "Then my wife would be my sister!" And he added, in a horrified tone: "But it's impossible that one should marry one's sister!" Then he reverted to his dread of tabes: He still cannot help being afraid that his pains are a consequence of masturbation and the precursors of a spinal consumption. He had always been afraid of sexual diseases, especially since an informative lecture by the school doctor during military training. And now he suddenly remembered an incident to which he had never given a thought during the eight years since it occurred. Towards the end of the period of military training he had fallen on his knees during an exercise; he was taken to the hospital, and was there for some weeks with a painful inflammation of the knee joints. His only consolation during this period was his friend, the girl with whom he had been so much in love, and who often came to see him in hospital. Once she ran up against his mother, and there was a violent scene, since he had given his parents to understand that he had acceded to their wishes, and had broken off all relations with the girl. This recollection was followed by another emotional outburst.

If we subject this case to a psychological analysis, we find:

1. The pain in the knees was originally organic; but many years later it recurred as a purely mnemonic excitation, because it had by chance coincided, temporally, with a strong affectively charged experience complex: namely, with the final break with the girl after the painful encounter with his mother in the hospital.

2. This affectively charged complex—the love for the girl nine years his senior, who resembled his mother (and sister) and thus, in the last resort, represented the mother-imago—had been repressed. As a matter of fact, the recollection as such was not repressed; although its emergence was considerably impeded, it was nevertheless present in the preconsciousness, and available. But the affective

charge appertaining to it had been repressed, inasmuch as the recollection of the complex, even if it did occasionally emerge, occurred quietly and without liberation of affects. Now, you will remember that in the repressed instinctual representatives we had to distinguish between two components: the instinctual affect and the instinctual object. In this case the instinctual object had in some degree escaped repression, and only the affect attached to it had been completely repressed. Now, this is a characteristic feature of the classic conversion hysteria. In no other psychoneurosis does the repression succeed so remarkably in banishing the pathogenic affects from the consciousness so that they seem to have disappeared altogether.

3. On the strength of what you have heard hitherto you would be justified in suspecting that there cannot be such a thing as the actual disappearance of an affect, but that some substitutive formation must vicariously appear to represent the repressed affect. And you will already have guessed that in the case under discussion the repressed affect discharged itself in the symptom of pain, which is likewise, as von Monakow has pointed out, a feeling and not a sensation in the physiological sense of the word; especially when it is not caused by external sensory stimuli, but is liberated by internal, mnemonic excitations. Then, in this case there was a transmutation, a conversion of affect, inasmuch as the repressed erotic feelings for the mother-imago, and the painful components of the patient's love for it, were transformed into a bodily pain, which was at the same time a symbol of the pain of separation.

4. This conversion of affect was made possible, in this case, first of all by the accidental synchronization of the appearance of the organic pains in the knees with the highly affective experiences of eight years before. It was only by virtue of this accidental and purely external synchronization that the pains in the knees subsequently appeared vicariously for an affective complex of quite a different (a purely psychic) character, and henceforth represented it in the consciousness. And the hysterical pain in the knees was at the same time a displacement substitute, inasmuch as the original affective charge had attached itself to an incidental and fortuitous concomitant circumstance of the total psychic situation then obtaining. The pain in the knees was in a way an allusion to a situation charged with an

abnormal amount of affect (the painful separation from the beloved), a substitution of the same in the consciousness by the displacement of the entire affect upon a fortuitous and temporary concomitant circumstance, the painful inflammation of the knee joints. If anyone were to tell us that he had dreamed that he was lying in hospital with violent pains in the knees, and if then, in the analysis of the dream, we obtained all the mnemonic associations mentioned from the dreamer, we should certainly interpret such a dream as a charade-like allusion to the situation then obtaining, much as we should have to interpret the young woman's dream of the "letter on black-edged paper" as an allusion to unconscious death wishes directed against her mother. What is more, we should be justified in telling the dreamer that on the day before the dream he must have had some sort of difference with his wife, or have been disappointed in her.

5. And now you will remember that our patient always had his attacks of pain in the knees after a quarrel or an unsatisfying coitus with his wife. If it had been a question of a dream we should perhaps tell him: The quarrel, or the unsatisfying sexual intercourse with his wife, had reactivated in the dreamer's unconscious the old repressed love for his first friend, who was like his mother, and was nearly ten years his senior, so that in this respect also she represented a mother-imago. The quarrel or the unsatisfying sexual intercourse with his wife, had reactivated in the dreamer's unconscious the old repressed love for his first friend, who was like his mother, and was nearly ten years his senior, so that in this respect also she represented a mother-imago. The quarrel or the unsatisfying intercourse (coitus interruptus on account of the dread of begetting unhealthy children; *ejaculatio praecox*) caused each time a fresh estrangement from the wife, an estrangement which doubtless had the significance of a refusal of love; and this refusal, in accordance with what you have already heard, automatically evokes a regression to the earlier erotic object, a recathecting of the latter with libido, and therefore the return of the desire to possess this object. But this desire was forbidden to enter consciousness, all the more so as behind it, in the last resort, is the incestuous desire to possess the sister (and behind that, in the deepest, primal repression, the desire to possess the mother). It could therefore enter the consciousness only in the form

of a charade-like allusion. Thus, the hysterical pain in the knees, if translated from the archaic unconscious into conscious and logical thought, would mean something like this: "In actual fact I still love only the girl in whom I found again my mother, whom I love above all; and not the wife whom I married only in order to forget her!"

6. And in the dream, as in the hysteria, the desire to possess the former love object approaches fulfilment in so far as it transports the dreamer, regressively, back to the time when he still actually possessed the girl. At the same time, the pain in the knees would mean: "I would rather bear the pain I suffered then, and be reunited to my old love, than go on living with my unloved wife!" The pain in the knees expresses, as it were, symbolically, the unwillingness to proceed—the unwillingness to continue to "go" with his wife, instead of with his former love.

Thus, in the symptom of the pain in the knees the desire for reunion with the former erotic object finds its symbolic fulfilment, and at the same time the reluctance to "go" any longer with his wife. Indeed, with the pain in his knees he is hardly able even to walk!

7. But further, a punitive tendency is clearly perceptible in this symptom; the revenge, as it were, of the superego; the pleasure derived from the former love is transformed into pain, and the patient, as it were, punishes himself for his mental unfaithfulness to his wife.

As in the dream, so in the hysterical symptom a number of contradictory tendencies, some belonging to the id, and some to the superego, are condensed in a single formation.

You see how the fiction that the pain in the knees suffered by this young man was only a dream has brought us very much nearer to understanding this hysterical symptom, thanks to the knowledge which we have acquired of the structure of the dream. Now you have merely to undertake the simple intellectual operation of representing to yourselves that the symptom is nothing more or less than a fragment of dream life, which is not, however, enacted in sleep, but which invades the waking reality of the patient like a singular foreign body, inasmuch as it materializes itself in one part of his body—you only have to do this, and you have almost completely grasped the psychological origin and structure of this hysterical symptom.

But three problems still remain unsolved:

1. Why was the pain in the knees in particular, and not some other concomitant factor of the psychological situation of eight years earlier, utilized as a displacement substitute for and allusion to the repressed erotic affect; in other words: The problem of the so-called choice of symptoms has still to be elucidated.

2. Further, we are no nearer understanding the physiological mechanism of the conversion process.

3. Lastly, what is the mechanism which liberates the hysterical symptom?

As to the problem of the "choice of symptoms," we may point to the fact that in the case under consideration the original organic pain in the knees was especially suitable as a symbolic representation of the pain of parting from the first beloved simply for the reason that it also was a pain. Hysterical pains, as analytic experience tells us, almost invariably prove to be conversions of psychic pains.

Secondly, this pain in the knees resulted *eo ipso* in making it difficult for the patient to walk, to "go"; indeed, he complained that the pains sometimes made walking almost impossible, and at all events a torture. They were therefore admirably fitted to become the symbolic displacement substitute for the (repressed) reluctance to "go" any longer with the unloved wife, and at the same time for the repressed, regressive desire to "go," not with her, but with his former friend (as an allusion to the time when he was still "going" with her).

Thirdly, the pain in the knees fulfilled the important condition of fitting in with the tendencies of the superego; and it was also to some extent in the service of the tendency toward self-punishment; for, as we have heard, long before his marriage our patient was afraid of spinal consumption, and when he first felt the pain in his knees he took them for the dreaded shooting pains of tabes.

Thus, if only for this reason our patient had for a long time past been predestined to manifest his unconscious instinctual conflicts in the form of physical pains, and the pain in the knees was especially fitted in every respect, as a conversion symptom, to condense the various opposed and incompatible impulses symbolically in a single compromise formation.

Our second task is the difficult one of explaining the physiological

mechanism of the hysterical symptom formation. The physician is accustomed to think in terms of anatomy and physiology; therefore, despite all the fine psychological interpretations which you have just been given he will still be puzzled as to what actually takes place in the nervous system. He will want to know the concrete processes by which an affect is displaced and several opposing tendencies condensed in a bodily symptom, a pain, which the patient really feels! He will ask how it comes about that a patient can feel a real physical pain in the knees instead of a repressed affective wish which would be painful to the consciousness. In other words: We still do not understand the physiological mechanism of hysterical conversion.

In order to understand this mysterious process the reader may be referred to two works by Ferenczi, who has subjected the problem to a thorough investigation. In the first of these essays (1916) the author—one of Freud's most talented pupils—proceeded from the familiar fact that persons suffering from physical ailments often lose all interest in the outer world and are concerned exclusively with their "precious selves." They suffer from a narcissistic regression of their libido, as Wilhelm Busch so aptly described in his lines on *Toothache*, which were quoted in an earlier lecture. In a great many cases, as the example of toothache shows us, the libido, on its withdrawal from the outer world, is not transferred to the total ego of a person, but is applied mainly to the diseased or injured organ. This organ is then the site of hysteriform symptoms, which according to Ferenczi are due to local intensifications of libido cathexis (the organ in question becoming, in a certain sense, an erogenous zone), and these symptoms may persist long after the organic disease is cured. These pathogenetic neuroses Ferenczi calls pathoneuroses. In their purest form we see such pathoneuroses after bodily traumata in the well-known form of accident hysteria, which I propose to call pathoneurotic hysteria. That in traumatic neurosis libido displacements of considerable magnitude must actually have taken place, may be deduced from the fact that the patients almost invariably complain of a more or less serious deficiency of genital potency; an impotence which many specialists have wrongly regarded as an organic symptom—that is, they have referred it to an injury suffered by the brain. But when one sees that these patients are interested almost exclusively in the injured organ (for example, in their "head injuries"),

and in the compensation for the accident, or the pension, which they hope to receive (the so-called "compensation neurosis"), such an assumption appears, in most cases, to be quite unnecessary, especially when no injury to the brain is manifest, and indeed has never occurred; and the conception of impotence as a consequence of the secondary neurosis is much more plausible.

In his second treatise Ferenczi points once again to the fact that it is not only in hysteria that normal conduction of the sensory stimuli into consciousness, and their motor discharge, are disordered or interrupted, but that under certain conditions similar phenomena may be evoked artificially even in normal persons—in hypnosis, and even by waking suggestions. Fantasies in hypnoid conditions, such as constantly occur in hysteria, will even more readily produce regressive excitations in the most disparate organs, and even in organs which are entirely withdrawn from the conscious influence of the will. We saw the same thing in Pavlov's conditioned visceral reflexes, so that it should not greatly surprise us if we find similar phenomena occurring in hysteria. And these hysterical symptoms are by no means mere hallucinations or delusions—nor are they "just imagination," as the layman often supposes—but actual physical reflex processes, analogous to the conditioned reflexes. For example, the well-known globus hystericus, the feeling of a lump in the throat, of which many hysterical patients complain, is caused by an actual spasm of the oesophageal musculature; while nervous asthma and hysterical vomiting are just as real,—that is, just as much reflex processes—as vomiting provoked by a gastric affection or increased brain pressure. We are dealing here—in Ferenczi's words—with actual "materialization processes in which an unconscious instinctual conflict—namely, an unconscious desire and its simultaneous denial, as though by magic are realized by means of the material at their disposal in the body, and—although in a primitive fashion—are given plastic representation." That is, the hysterical patient himself produces the physical excitation processes, which he then (with the help of agglutinative causality) misinterprets in an illusory fashion.

Here the comparison with the hallucinations of dreams obtrudes itself. In sleep the representative centers of the senses (the "perceptive organ of the cerebral cortex") are largely cut off from the outer world; the exteroceptive sensory excitations, which in the waking

state are constantly flowing in from the peripheral end of the perceptual apparatus, are largely excluded. For this reason alone the overflow of endopsychic excitations into the sensory centers of the cortex is facilitated. On the other hand, owing to the lack of sensory excitations, which creates a certain "stimulus vacuum," these centers become super-excitabile for the endopsychic (mnemic) stimuli; they now dominate the field, since they alone can now "cathect" the sensory centers of the cortex, and for this reason the endopsychic excitations assume the quality of sensory perceptions—that is, of hallucinations. And since these mnemic excitations largely proceed from the unconscious, the dream-perceptions, both in form and in content, must needs obey the laws of archaic, primitive thought.

In just the same way, Ferenczi argues, the hypnoid condition in the hysterical patient, owing to the exclusion of the critical integrational function of the waking consciousness, facilitates a cathecting of the sensory spheres of the cortex by psychic formations of the unconscious: that is, by fantasied impulses and wishes of all kinds.

Nevertheless, there is a difference between the dream state in sleep and the hypnoid states of the hysterical patient, which is of decisive importance as regards the operation of the excitatory processes: for in sleep the motility is largely paralyzed; in the hypnoid state and the subsequent waking states of the hysterical patient it is at the disposal of the unconscious—though, as we shall presently see, only to a limited extent. But here the excitations flowing out of the unconscious are not directed solely to the sensory spheres of the cortex, but under certain circumstances they can produce an immediate motor discharge. However—as we have indicated—this motor discharge must operate within certain narrowly circumscribed limits—namely, within the limits of those phylo- and ontogenetically ancient (primitive, infantile) functional spheres to which the instinctual desires of the unconscious belong. For the motor apparatus of the brain is, as von Monakow has convincingly demonstrated, stratified in a strictly chronological manner; and in accordance with the inviolable laws of mnemic ecphoria (Semon), mnemic excitations, emerging in isolation and belonging to the stratum of the infantile unconscious, can traverse only the excitation-arcs of their own temporal stratum. The hysterical innervation processes—the motor as well as the sensory symptoms of hysteria—therefore represent physiological re-

gressions to early infantile phases or strata of the psychophysical apparatus: "Here," says Ferenczi, "we have to think of the psychic as simplified, even in its form, into a physiological reflex process." This primitive stage of development, within which operate the innervation processes of hysteria, he calls the *protopsyche*, or the *autoplastic stage*, by which he means that the nervous system tries to deal with disturbing stimuli, not so much by influencing the outer world through the motor apparatus, as in reacting to them mainly by changes in one's own body. That is, in this stratum of the psychophysical apparatus states of psychic excitation are always directly liquidated by motor or sensory discharge. But in this process the protopsyche can never dispose of the whole, complete sensory-motor functional sphere, but only of fragments of the latter, just as in the case of the very young child or the infant at the breast.

A few examples will illustrate what I have said:

A woman had a sexual experience, which she could not get over; she "could not swallow it." This inability "to swallow it" materialized itself in her oesophagus; just as in a dream image, it was plastically and sensibly represented, manifesting itself as a cramp of the musculature of the oesophagus; that is, as the *globus hystericus* already mentioned, which the patient feels and interprets as a foreign body in the throat.

Another hysterical patient had an experience which, from the standpoint of his superego, he wished had never happened; he would rather "look away" from it; yet "from another side" it constantly enticed him to experience it again. The result of this conflict was that curious cramp of the neck and shoulder muscles which is described as *torticollis hystericus* or *mentalis*, in which the patient, every few moments, turns his head suddenly and convulsively to one side, yet as he does so the effort to turn it back again, toward the other side, is plainly evident. Here the conflict between "I want to look again" and "I must look away from it" finds a plastic representation in the form of a complicated, involuntary innervation process in the patient's own body.

So you see that the phenomena of hysterical materialization correspond very closely to the analogous processes in the dream psyche, and they evidently follow the same laws: Here too, in hysteria, an instinctual conflict is condensed in a single formation, but with the difference, that this formation is not merely an hallucination, but a physical innervation process; that is, a conversion phenomenon. Whether this innervation process assumes the form of a hysterical pain or a hysterical anesthesia, or whether it expresses itself in a hysterical paralysis, or contracture, or in a hysterical fit, depends, on

the one hand, on the content of the operative unconscious excitation and on the other hand, on the form in which the simultaneously released conditioned inhibitory reflexes (the censorship of the super-ego) interpose themselves in the innervation process.

Since the stimuli which provoke the phenomena of hysterical materialization are purely mnemonic excitations (from the unconscious), the resulting hysterical symptoms are not bound up with the anatomic projective system of the sensory spheres and the motor paths and centers in the brain, as is the case with exteroceptively evoked excitations or phenomena of organic defect (for example, the destruction of projection paths and centers in the brain), but must of necessity shape themselves in accordance with the content of the operative mnemonic excitations. Thus, for example, an hysterical paralysis of the arm is not demarcated in accordance with the familiar peripheral or spinal tracts, nor does it exhibit the features of an organic cerebral paralysis, but rather follows the psychic "body-schema" in Schilder's sense of the term. This psychic body-schema is not anatomically articulated, nor does it take account of the anatomo-physiological projection systems of the cerebral paths and centers, but adjusts itself exclusively in accordance with such primitive functional conceptions as "head," "arm," "leg," etc., as they originated in childhood. As has already been said, the physical phenomena of conversion (materialization) may be conceived as physiological regressions to the autoplasmic, primitive stage of the protopsyché, so that, as Ferenczi has truly observed, "the physiological basic mechanisms place themselves at the disposal of unconscious impulses, so that in the complete reversal of the normal discharge of excitation a purely psychic process (unconscious wish fantasy) may find expression in physiological somatic vicissitudes." It is now time to examine more closely these basic physiological mechanisms which are activated in hysteria. As has been explained, their activation takes place with a more or less complete exclusion of the superimposed excitation-arcs, which do not belong to the protopsyché, but to later stratifications of engrams. Thus, in the formation of hysterical conversion phenomena there is always a functional exclusion of certain phylo- and ontogenetically older apparatuses belonging to the protopsyché from the higher apparatuses of integration which are superimposed upon them. To this extent, then, as von Monakow truly observed, hysterical symp-

toms are "isolation phenomena," like the symptoms following upon the organic injury of certain paths and centers in the brain; except for the fact that, as we saw, they do not follow the anatomic patterns of projection and association, but—in accordance with the content of the operative mnemonic excitation—the psychological body-scheme. It seems, then, that the functional isolation in hysteria occurs principally inside the main ganglionic system of the diencephalon; according to R. Bing in such a way that the phylo- and ontogenetically old palaeostriatal movement automatisms are isolated from the inhibitory influence of the neostriatal elements of the putamen and the nucleus caudatus. In the palaeostriatum the hysterical patient, according to Bing, has at his disposal "ready-made patterns" (von Monakow's "kinetic melodies"), which he can utilize in the realization (plastic representation) of his unconscious motives. Here we have partial complexes of those complicated instinctual automatisms which were discussed in the first lecture, in connection with the interesting experiments of W. R. Hess. Hence we can readily understand the similarity between the great hysterical symptoms—at least, in so far as they are motor symptoms—and the extrapyramidal disorders of the postencephalitic; this similarity, as we heard in the seventh lecture, led Marinesco and his pupils to form the erroneous conception of hysterical phenomena as symptoms of organic extrapyramidal lesions, and to construct their theory of "hystero-Parkinsonism." Marinesco's mistake was to confuse the innervation mechanism in hysteria with the motives which first set this mechanism in operation; and these motives, as you have heard, arise from the unconscious. Of Marinesco's theory only this much was correct: the hysterical patient suffers from a constitutional deficiency of "psychic synthesis" and an abnormal tendency to lapse into hypnoid conditions, which facilitate the physiological isolation of the extrapyramidal systems from one another (isolation of the palaeostriatum from the neostriatal apparatus and therefore from the innervatory influence of the highest cortical functions, from the critical apparatus). But at this point the repressed motives must begin to operate, the motives which first shape the symptom inasmuch as they determine its content.

Apart from the purely negative factor—the isolation of the perceptual apparatus from the outer world (a process which would correspond with the "apathic anastole" or diaschisis of von Monakow)

—there is also a positive factor that plays a part in the creation of dream hallucinations and the conversion symptoms of hysteria; the fact that the hypnoid state favors the free flow of excitation quanta from one psychic element to another, even though this be widely separated from it and associated with it only through purely external features; that is, it favors the irradiation of stimuli, and thus makes possible the opening up of paths which in the waking state would never be possible or practicable, since they occur only in archaic, primitive thought. Under these conditions excitation quanta of archaic, primordial instincts, which have achieved ecphoria in hypnoid states, but whose discharge into the normal motor innervation (in the form of a systematic action) is barred by the interference of the conditioned inhibition (censorship of the superego), may very easily run into other paths. This would give us the physiological explanation of the "movement-storms" (Kretschmer's "*Bewegungssturm*") in certain forms of hysterical attacks. This conception is also in complete agreement with the results of Pavlov's investigations of the "excitation-inhibition conflict" (cf. Lecture 7). We saw, in the seventh lecture, that Pavlov was able to produce artificial neuroses in dogs by gradually reducing the excitation differential between the stimuli which released positively or negatively conditioned reflexes. In this kind of experiment the dog reacted only up to a certain point; when the strain became too much it could no longer respond with either a positive or a negative reflex, but lapsed into a state of intense irritation, which resembled a hysterical fit, or else into a depressive apathy. In hysterical "movement-storms" certain general behavior patterns of the affectivity find functional expression or discharge; such as repressed rage, vexation, hatred, and every form of the restrained tendency to aggression; so that we can describe this type of hysterical attack as "functional hysterical affective crises," inasmuch as no definite contents of the unconscious (fantasies, conceptions etc.) are dramatized by them, but definite functions of the (repressed) affectivity. Among the functional hysterical affective crises are the convulsive fits of shrieking, laughing, weeping, dancing, and other peculiar general motor-reactions of hysteria. In addition to these functional attacks there are, as we know, other attacks—and these are the classic attacks or fits of *grande hystérie*—in which the irradiation of the unconscious (repressed) mnemic ex-

citations does not occur merely in the form of a disorderly and general affective discharge, but flows into perfectly definite paths of the protopsyché, in accordance with definitely differentiated contents of the unconscious (fantasies plastically represented in the form of compound actions; that is, symbolically realized). In opposition to the "movement-storm" these differentiated hysterical attacks have a perfectly definite significant content, which is represented in each successive phase of movement, as in a charade.

This is practically all that can be said, in the present state of science, concerning the extremely complicated problem of hysterical symptom formation, from the bathypsychological and neuropsychological (innervation-technical) standpoint. You see that we are confronted with a problem of such a nature that in discussing it we often approach the verge of the metaphysical, and now and again, as Ferenczi had already realized, it almost extends into the sphere of parapsychology. Before we pass on to another subject, one last comment, perhaps, will not be wholly superfluous; it refers to a kind of "explanation of symptoms" which is still quite usual in certain circles. The example which we chose—not without intention!—of a hysterical pain in the knees would be regarded, by many, as a welcome confirmation of the old trauma theory of Charcot; after all, in this case it is easy to show that the symptom really seems to be nothing more than the "psychic fixation," the perpetuation, as it were, of an originally organic pain, which our patient had suffered eight years earlier as the result of an accident. But you must already have noted where the weak point of this kind of "explanation" lies: the trauma theory really tells us nothing more than the fact that in this case the physical pain of a trauma suffered some time earlier was utilized in the formation of a hysterical symptom; that is, it was revived, years later, in the hysteria; but evidently it cannot in any way explain why and how this happened. We have by no means "explained" a hysterical symptom if in the anamnesis we have been able to discover a physical or even a psychic trauma. In other words, the trauma theory in this case, as in all similar cases, offers only an apparent explanation. The real explanation of the symptom remains obscure; that is, the elucidation of the necessary causal connection between the old physical pain and the subsequent hysterical manifestation.

The interpretation of hysterical processes by a technical explanation of this interpretation would always be incomplete if it could not help us to understand the liberation of the symptoms which often occurs periodically. This problem no longer offers any special difficulty if we recollect the laws of mnemonic ecphoria, which hold good for all periodical vital processes; that is, all processes which are subject to the "repetition compulsion," as Freud called this phenomenon.

Think once more of our example of the hysterical pain in the knees. You will remember that this symptom occurred from time to time only under quite definite circumstances: it was provoked either by a quarrel with the patient's wife or an unsatisfying intercourse with her. Both situations had evidently the significance of a denial of love. This denial had, to begin with, the consequence that the libido was withdrawn from the present erotic object. Thereby the conditions were created for regression to an earlier erotic object; this regression, as you will remember, was to the patient's former friend, who was almost ten years his senior, and who resembled his mother; thus in every respect she was a mother-imago. And then, finally, the libido of the patient regressed to the old oedipal desire to possess the mother. That our patient, unconsciously, had a strong incestuous fixation on the mother is shown by the fact that he finally sacrificed his friend to his mother; inasmuch as he broke with her for his mother's sake (consciously, in obedience to her wish), although the girl was in every respect his ideal. But his second choice also was unconsciously subject to the influence of his mother-fixation, inasmuch as he married a woman whom he did not love, and who resembled his mother as little as possible, so that his libido could remain all the more firmly attached to his mother. At the same time, this marriage was subservient to his superego, inasmuch as it was a "flight from incest." The marriage itself was really a symptom.

And now you must call to mind the two following facts: firstly, the circumstance that our patient's father was an alcoholic addict, and that in his early youth he had constantly been the unwilling witness of violent quarrels between his parents. And secondly, that the final renunciation of his first friend—the mother-imago—was preceded by a violent dispute with his mother—it was when he was lying in hospital, suffering violent pain in his knees. We now under-

stand why the situation of the quarrel, of the threatened loss of his lover, was particularly apt, even in respect of the actual psychic attitude of the patient, to provoke the regression of libido to its "fixation-point"—that is, in the first place, to the former lover, but finally, to the oedipal wish. At the same time, we see the connection between this neurosis and the situations of early childhood, inasmuch as the alcoholic environment, with its continual conflicts and disputes, doubtless added a pronounced acquired predisposition, in the sense of Freud's "complemental series," to the congenital predisposition which may have existed from birth, owing to the alcoholism of the father (cf. the eighth lecture on the *Hereditary Nature of the Neuroses*). Here, too, we must remember how frequently "nervous" children, if they imagine that their mother is neglecting them—that is, if she denies them her love—will produce all sorts of pathological symptoms, or even simulate them, in the conscious or unconscious intention of securing the mother's loving care, or better still, of enforcing it; from this point of view, therefore, many children's neuroses may very well be regarded as a sort of erotic blackmail.

The symptom of the pain in the knees had doubtless been formed long before its first appearance, even before our patient's marriage, and was therefore, at least in its elements, already present in latency. It went back, of course, to the scene in the hospital eight years earlier. On the other hand, it would be released only when the conditions for the beginning of regression were present. These conditions were fulfilled by the refusal of love on the part of the wife. This, for the patient, was like a cue for which his organism was waiting, in order to manifest the hysterical symptom that served as a symbolic displacement substitute for the unconscious wish impulses, and at the same time for the counter-efforts of the superego, which were from time to time evoked by this refusal. In other words, the refusal was in a sense the alarm signal which was followed, on each occasion, by the liberation of the symptom.

Thus, the liberation of symptoms, in hysteria, as in the other psychoneuroses, is effected through the mechanism of the conditioned reflex. But note this carefully: only the *liberation*, not the *formation* of symptoms. For the hysterical symptom, as was shown in the seventh lecture, is not in any way comparable with a conditioned reflex;

it is rather an exceptionally complicated product of an instinctual conflict; in other words, a compromise between mnemonic excitation and inhibition processes which both in form and content are strongly differentiated. On the other hand, the periodically appearing psychoneurotic symptom, once it has been formed, is released, like a conditioned reflex, as a whole, on the repetition of definite situations which act like signals: as an "occasional apparatus" in Bleuler's sense of the term, it is present long before its first liberation, and it appears, just as it was formed in a hypnoid state, like the djinn that obeyed Aladdin's magical lamp, whenever the conditions of its ecphoria—a verbal cue, a definite situation or action—are fulfilled. Or, to express the matter in physiological terms: the process of the regressive recathecting or retraversing of old protopsychic paths or circuits occurs quite automatically on every return of a situation which once again ecphorizes the mnemonic excitations arising from the unconscious. The whole complicated apparatus is preformed in all its excitation circuits, and ready for use, just as a telephone apparatus with its monstrously complicated network of circuits is ready for use even if it is not utilized; only the completion of the circuit by the lifting of the receiver—which may be likened to the mnemonic cue—will activate it.

But now, having come to the end of my lecture on hysterical symptom formation, I am afraid that all these theoretical expositions may have seemed to you extremely involved and difficult to understand. I should therefore like to illustrate what has been said by two representative cases which may help you the better to understand what you have heard.

A long while ago a colleague sent a girl of seventeen and a half to me for neurological examination and diagnosis. Some seven weeks earlier the girl had suddenly developed a total relaxed paralysis of the right arm, which so far had not responded to any treatment. The physician had at first thought of infantile paralysis, but had then become suspicious, as after the lapse of many weeks there were no signs of muscular atrophy. When I saw the patient the arm was hanging down, absolutely limp and lifeless; it could not even be moved in jerks. The skin, all over the arm, was livid, and felt several degrees colder than the left arm. In particular, the hand was blue and perceptibly swollen. Further, the whole arm was almost completely anesthetic for all kinds of sensation. Despite these serious motor, sensory and trophic disorders the electrical excitability of the nerves and muscles in all the innervation areas of the right

upper extremity and the shoulder-girdle proved to be completely normal. It was also a fact, as my colleague had remarked, that although this serious condition was of many weeks' standing there was still no perceptible muscular atrophy and the reflexes were normal. On account of all these criteria the diagnosis could only point to hysterical paralysis—and this despite the conspicuous involvement of the vasomotor system of the skin, which at first reminded me of the clinical picture described by Babinski and Froment as "Physiopathic disturbances of a reflex order." The further course of events entirely confirmed the diagnosis of hysteria, and thus the case was a complete contradiction of the theory of "pithiatism" expounded by these authors, according to which only such troubles should be called "hysterical" as can be voluntarily produced—that is, simulated.

In accordance with my conviction of the purely hysterical nature of the paralysis, I began psychoanalytic treatment, from which relatively prompt results might be anticipated, since the symptoms were not of such very long standing. My expectation was confirmed. It is true that in the first few sessions I encountered an almost insuperable resistance from the extremely shy and reserved patient; she continually assured me that she had not the least notion of the circumstances under which the paralysis had made its appearance. In the course of time, however, she became more expansive, since I had intentionally avoided further reference to this critical point. She told me all sorts of things about her family circumstances and her personal affairs. She was studying at a commercial college, expecting to take her final examinations in the near future. Her father was a potter by trade, and his studio was in the family apartment. He employed several assistants. When I inquired about the latter the patient suddenly seemed unable to continue; but she then mentioned an elderly worker, then a younger assistant, and finally, quite casually, a young and pretty girl. I learned, moreover, that her parents quarrelled a great deal, and she finally admitted that her mother was jealous of the young woman employed by her father. After overcoming fresh blockages she suddenly recollected an incident which had occurred one night about seven weeks earlier: The patient's bedroom was next to the studio. That night she had gone to bed earlier than usual, and had soon fallen asleep. Suddenly she was awakened by the sound of some falling object, which seemed to come from her father's studio. She was greatly startled—allegedly because she had assumed that there must be thieves in the house. She rose, dressed herself, left the room, and silently opened the door of the studio. What she saw there filled her with wrath and disgust: she saw her father, with the pretty young employee, in the most shameless situation. On the table, in front of the couple, lay a large kitchen knife, and the remains of a meal which the two had apparently eaten quite recently were lying about. The girl was overcome with indescribable anger; she seized the knife, raised her right arm, and was about to rush at her startled father with the uplifted knife. But at this moment the arm sank powerless and was paralyzed from then on. During this dramatic narration the patient became increasingly emotional, and when she described how she seized the knife lying on the table and raised it, she involuntarily lifted her right hand, clenched her fist, above her head, made a wild, stabbing movement with the convulsively clenched fist—and let her arm fall again, powerless; whereupon she broke into an uncontrollable fit

of weeping. As you see, without realizing it she had re-enacted the scene, dramatically, in all its details, and with the release of the violent emotion which had been so long repressed the hysterical paralysis of the arm had disappeared for ever. The indignation and indescribable anger which had overcome the girl at the sight of what was happening in the studio became still more intelligible when I learned, during the next sessions, that when the child was about fifteen she herself had been repeatedly exposed to downright sexual aggression on the part of her father; she had defended herself only with difficulty, and since then had often relived these scenes in erotic dreams. Her indignation was therefore not of a purely moral nature, but was not devoid of a certain admixture of jealousy.

This case hardly calls for any further commentary. You will recognize from the nature of the symptom the characteristic repression of affect, which in this case was suddenly broken down during analysis by the dramatic reproduction of the scene in the studio, whereupon, with the stormy liberation of the tremendous affective charge which had been dammed up for seven weeks, the symptom disappeared in a flash.

One day I was consulted in respect of a girl of eighteen. Two weeks earlier, while apparently in perfect health, she had had a sudden seizure with tonic spasms and clouded consciousness. The seizure had afterwards recurred several times in exactly the same forms; further, for some days past the girl had manifested a conspicuous unsteadiness on walking. The physician in charge of the case had thought of the possibility of an incipient cerebral tumor. This suspicion, fortunately, was not confirmed; the most careful examination showed that the state of the brain was completely normal. On the other hand, I noted many things in the patient's behavior which led me to suspect that the trouble might be hysterical; she was extremely shy, taciturn, and reserved, and seemed to be greatly depressed, though she tried to conceal her depression by a forced smile. I therefore proposed an analysis, which, in view of the circumstance that the trouble was of recent origin, would not be very difficult.

First of all, I learned from the patient's mother that the girl, who was attending a teachers training college, had for some time past been on conspicuously intimate terms with an older male pupil. The mother had not felt quite comfortable about this affair, and had repeatedly advised her daughter to have nothing to do with the pupil in question, since she had heard that the youth had a bad reputation. One day, it was the seventeenth of June, she had found a paper in one of the girl's notebooks; on this were the hastily scribbled words:

"In memory of the 6th of June," and under these was Hermann Hesse's poem, *The Hour*:

There still was time: I could have gone,
And all that's done had been undone.
All things had still been fresh and clear
Just as before that day they were.
It had to be . . . The hour was spent,

Brief hour and sultry; when it went,
With swift, inexorable stride,
All the clear light of youth had died.

The startled mother naturally questioned her daughter immediately: what had happened? Of course, she had been with that fellow again, who had always been tagging about after her lately? She had warned her against him, long ago! But the girl would not speak; she admitted nothing. But that very day, soon after the violent altercation with her mother, while she was at home, busy at her drawing board (note this detail!) the patient had her first seizure.

Of course, something had happened. When I pressed the patient to tell me the meaning of the memorial page in her notebook she told me, after overcoming the most intense resistance: On the 6th of June there had been a drawing session out of doors. While she was sitting, with her portfolio, some way behind the other pupils, her lover had approached her secretly and had challenged her to play truant and go for a walk with him. She allowed herself to be persuaded, and surreptitiously crept away with him. They exchanged passionate kisses, and embraces, followed in a lonely spot, deep in the forest, by sexual congress and defloration. On this occasion—according to her further statements—she evidently experienced an intense orgasm. Fortunately the young man had sufficient prudence to withdraw before ejaculation. But from this time onwards the girl's libido had completely vanished; while until the occasion of this first intercourse she had been greatly excited sexually, and her libido had grown more and more urgent until it finally culminated in this sexual act, from this time onwards the girl no longer had any feeling for her friend, whom she was driving to desperation; indeed, she nervously avoided being left alone with him, evaded him if she could, or at most exchanged a few indifferent words with him. Directly after this incident she had felt terribly afraid lest her irresponsible behavior might have serious consequences for her, and at the same time, as she at last tearfully confessed, she felt repelled by certain accessory phenomena which she had noticed after the act.

After all that you have heard it will not be difficult for you to divine the connection. What had happened? Subsequently repelled by the event, and alarmed, and surrendering to the dictates of her bad conscience, the girl had from this moment completely repressed her libido; aversion, fear and anxiety co-operating in the repression. The altercation with her mother, however, two weeks after the incident, excited her defiance, and aroused, in the unconscious, the desire once more to experience the feelings which she had first known in all their violence on the occasion of that first, forbidden surrender. But that she must not do! Yet now, as she sat at her drawing board again, doing the very work from which she had secretly crept away, in her reprehensible frivolity, on the fatal occasion, she suddenly began to dream, and now, in the hypnoid state, the repressed desire irrupted with elementary violence and discharged

itself, achieving a symbolic satisfaction, in the hysterical seizure. For anyone who has seen a typical seizure of the so-called *grande hystérie* cannot doubt that the attack, with its convulsive, palpitating, ecstatic movements, is nothing less than a plastic representation of the sexual act. And if, in spite of all, you should still doubt this, you must consider that even C. von Monakow, who otherwise had not much use for psychoanalysis, could no longer refuse to admit the fact, having found, in Trousseau's once celebrated *Traité de thérapeutique* (published about the middle of the nineteenth century) the following passage, in a contribution from the French physician, Pidoux:

"In the case of the woman," says Pidoux, "there is one physiological action which is of the greatest significance in respect of the search for the origin of (hysterical) seizures, and which, in particular, confirms the opinion of those who regard the uterine system as the focus of this neurosis. This action is coition. Let us consider the typical case of a woman who is afterwards keenly aware of the impressions that accompany this process; the quick, violent palpitation in the precordial region, the deep, quickened breathing, the broken, sobbing sighs, the upturned eyes, the forward thrust of throat and bosom, the clonic and convulsive movements of the pelvis, the now protracted, and now clonic, but always involuntary contraction of the limbs, and finally, at the climax of the act, the twitching and spastic excitation of the entire muscular system, the stifled cries, and often the complete swoon, until the body lapses into a state of relief and relaxation which gently passes into sleep.

"Without realizing it, we have described the second phase of an hysterical seizure: Must not the hysterical spasm and the orgiastic convulsion owe their origin to the same source, and develop in accordance with the same laws?" (Cit. from von Monakow and Mourgue, p. 261).

Even in the seizure of *grande hystérie* we find precisely the same mechanisms as in all the other hysterical symptoms; the repression of affect typical of hysteria (in this case the repression of sexual libido by anxiety), the preparation by a refusal or denial—the liberation of the symptom by a situation, quite unimportant in itself, which is associatively connected with the repressed traumatic experience merely by the purely external factor of simultaneousness (in this case, the drawing lesson); that is, by a displacement on to a trifling detail which becomes a symbol and a signal, and finally, by the irruption of the repressed desire and its symbolic gratification through a displacement substitute, which in hysteria is always provided by means of conversion—that is, by plastic representation in

the patient's own body.¹ The case is especially instructive, because it enables us, to a certain extent, to perceive the symptom formation *in statu nascendi*, before all the numerous complications have appeared which never fail to appear if a psychoneurosis is of long duration, gradually and increasingly obscuring the pathogenesis of the disorder and the symptom formation.

¹ Incidentally, it may be noted that the conspicuous unsteadiness of walking, which simulated a cerebral ataxia, was completely explained by the analysis. The patient, like our male patient with the hysterical pains in the knees, could no longer "go" with her friend, and wavered secretly between obeying this prohibition and the repressed delight in contravening (overstepping) it.

Eighteenth Lecture

Symptom Formation in the Phobias

Ladies and Gentlemen:

The nervous anxiety states are among the most widely disseminated of all the psychic disorders with which the neurologist has to deal. We have already met with many cases of anxiety in the course of these lectures, and in anxiety neurosis we encountered it, as it were, in pure culture. In the sixth lecture, which was devoted to the study of this actual neurosis, you were told that there are certain general biological conditions under which anxiety is always developed. This general condition of the development of anxiety is fulfilled if a primary instinctual impulse which has reached a very great intensity suddenly collides with some external or internal obstacle, so that the instinctual process is checked for the moment. The libido thus impeded is invariably transformed into anxiety.

Analytic research has elicited many proofs that at the beginning of every psychoneurosis anxiety plays an important part as a primary pathological factor. We might define its role by saying that the ego is afraid of the primary instinctual impulses arising from the unconscious. Under pressure from the superego, it has to oppose them with a categorical *No*. We might put it like this: The ego is afraid of an internal or instinctual danger. The anxiety is, in a sense, the signal of this instinctual danger. In contrast to the actual neuroses, here the purely physiological, hormonal factor of libido impedance is seconded by a psychologic factor, which not only gives the psychoneurotic anxiety a special coloring, but also to a great extent co-determines the further processes which attach themselves to the primary process of instinctual anxiety. The process now no longer consists in the merely quantitative transposition of the energy of the rejected primary instinctual excitation into the qualitatively quite otherwise constituted primal sense of freely floating anxiety, but results in an extensive binding of the anxiety in the psychoneurotic

symptom, with the consequence that the anxiety is to a great extent concealed.

This attachment or binding of anxiety to the symptom is most completely effected in hysteria, inasmuch as the affective charges of the rejected instinctual impulse, like those of the inhibiting censorship of the superego, are almost completely transposed into bodily innervation processes; the anxiety, here—or at least, for as long as the symptom can be maintained—has actually disappeared, as though neutralized; much as though a dangerous acid were neutralized by saturating it with an alkaline base. On the other hand, in the phobias the anxiety remains in the psychic state; yet even here it is made very largely innocuous in so far as it is no longer bound to the original object representative of the dreaded primordial instinct, but has attached itself to a substitute object or a substitute situation. The main difference between the phobia and the anxiety neurosis consists in this: that the phobic anxiety is no longer merely hormonally liberated (by the physiological factor of the damming up of libido) and is no longer objectless, but its release is conditioned by the appearance of definite anxiety objects or anxiety situations. It has therefore become a conditioned anxiety: that is, the anxiety can no longer suddenly seize upon the patient at any moment, without warning, sudden as a lightning flash from a clear sky, but appears only under the condition that the relevant object, or the specific situation which aroused anxiety happens to appear in the consciousness. And the patient can to a certain extent cope with this particular danger, by avoiding the dreaded object or situation as far as possible. As long as he does this he is free from anxiety.

The phobia, then, is a typical situation anxiety, and the situation and objects to which a phobia can attach itself are legion; for example, one patient is afraid of traveling by rail, or of boarding a ship, or of walking across a bridge; other phobiacs suffer from an unaccountable dread of certain perfectly harmless animals, such as mice, cats, or fowls; in others anxiety is attached to definite activities, such as shaving, or telephoning; or to processes which may occur in one's own body; for example, the phobic may be afraid of blushing, or of suddenly breaking wind in polite society. Lastly, there are phobias which relate to certain dishes, for which the patient, from a definite moment, suddenly conceives an insuperable aversion. There is, of

course, no sense in trying to classify the phobias with regard to different objects or situations, as Stanley Hall once attempted to do. This author was the first to endow the different phobias with fine Greek names, according to the objects or situations to which the anxiety was attached (nautophobia—dread of ships; gephyasphobia—dread of bridges; claustrophobia—dread of closed spaces, such as churches, concert halls, theaters, etc.; mysophobia—dread of mice, etc.). Such classifications are of course without scientific value, for you will realize that any object or situation may occasionally become the object of a phobia, according to the personal experiences of the patient in question; so that in the end one would have to distinguish as many phobias as there are objects or situations capable of arousing anxiety.

All these occasions of anxiety have this in common: that for normal persons they could not be the objects of any kind of fear. Consequently the healthy person cannot understand how the phobic can be afraid of such harmless things, and he speaks, not without reason, of an "hysterical horror" of mice, spiders, solitude, etc. The phobic himself tries, of course, to rationalize his fear, telling himself, perhaps, that after all one is always reading about railway accidents, collapsing bridges, ptomaine poisoning, murderous assaults, and so forth. It must be admitted that certain of these objects or situations might indeed, under certain circumstances, represent a real danger; for example, railway accidents do constantly occur, and lonely women are sometimes attacked in their homes by burglars. But the fact that here we have merely secondary rationalizations, and not the actual cause of the anxiety, is readily realized from the absurd precautions which the patients are accustomed to take in order to allay their anxiety. For example, an old maid is not content with looking under the bed every night before retiring in order to convince herself that no burglar is hiding there, but she also inspects the narrow space between the back of the wardrobe and the wall, and even looks into the commode lest perhaps someone should be hidden there, although the slightest consideration would make it clear that there is no room there for a human being. Further, the railways, in spite of the catastrophes recorded in the newspapers, continue to be used by millions of passengers in every quarter of the globe. One is reminded of what Mark Twain had to say on the

subject of railway phobia. When a phobic once endeavored to justify his fear of railways, by telling the great American humorist how many persons were killed every year in railway disasters, Mark Twain dryly replied that he had discovered that a great many more people died in their beds every year, and since he had realized this he no longer ventured to make use of a bed, but made a point of spending the night in an armchair. He hoped by that means to become at least an octogenarian!

It is a characteristic feature of the phobic dread of crossing the street or traveling by rail that the phobia makes itself felt only when the sufferer is alone, but not when he is in the company of other persons. The reason usually given for this is that the companion could bring help in the event of actual "danger." How invalid this reason is in reality you may see from the example of one of my patients, who suffered from railway phobia: This patient was free from anxiety and had no objection to entering a train if only she had her two-year old child with her! There are, of course, quite a number of other phobic situations in which no perceptible danger exists: consider, for example, the majority of the animal phobias. Mice, as you know, of which many women are so immoderately afraid, are excessively timid animals, which take to flight at the faintest sound. But the phobic is immune to all such remonstrances; his fear is "unapproachable"; there is no getting the better of it by reasonable arguments.

But now we will describe another actual case, in which the psychologic structure of the phobia is plainly perceptible:

A boy of twelve was brought to me by his mother, who had herself been my patient in the past, when she had undergone a prolonged treatment on account of psychoneurotic symptoms. The boy was suffering from peculiar anxiety states which had been developing gradually for about two years. Although the boy was physically very strong he imagined that he was too weak to attend the gymnastic class, and applied to be excused this subject. For two years he had been really afraid of gymnastics; he trembled before every class, and he was actually constantly having accidents. For four months, moreover, he had been suffering from a morbid dread of conflagrations, so that if his parents were absent in the evening he never slept until they had returned. About two years ago he had begun to suffer from sudden attacks of headache. Further, it had recently struck his mother that the boy had become extraordinarily prudish; for example, he was extremely embarrassed if he had to appear naked even before her. Incidentally I learned that for the past two years he had been suffering from an insuperable aversion to sausages, but only of the kind that came to the

table whole, and which one could pick up and bite. The chief reason why it had seemed urgently necessary to obtain neurological treatment for the boy was, that for two months he had been suffering from an increasing dread of examinations; although he was one of the most intelligent pupils in his class he had worked himself up into a morbid state of apprehension lest he should be unable to pass the entrance examination at the gymnasium, and even if he did he felt that he would never succeed in matriculating later on. So it was useless to go on preparing for the entrance examination. But with this the list of his numerous phobias was not yet exhausted. Only in the course of the analysis did it emerge that for three years the boy had felt afraid, on going to bed, that someone might have hidden himself in the room, so that he always looked under the bed, and also into all the cupboards; indeed he even had to look into the commode, in order to convince himself that there was really no one there. Further, during the numerous journeys abroad which his father had to make, as a wholesale merchant, he was in constant dread lest something should happen to his father; above all, lest he should be the victim of a railway catastrophe. At the same time he had developed a personal dread of bridges; he always hesitated before crossing a bridge, since he was overcome by the obsessional fear lest it might suddenly collapse while he was halfway across. And lastly, during the family's numerous excursions by car he was in constant dread of a collision—but only if he was sitting in the back with his mother and sister; if he sat in front with his father the anxiety disappeared.

Physically, as I have said, the boy was very well developed for his age; his muscles were powerful; in short, there was nothing whatever amiss with his physical condition. He was also extraordinarily handsome, so that, although he was only just twelve, women and girls used to turn round to look at him, and his appearance—for example, in a hotel dining room—always attracted general attention. At the same time, there was something soft and almost girlish in his looks.

The analysis, to begin with, elicited the fact that Max (for so we will call him), two years before he came to me—that is, shortly before the acute outbreak of his various phobias—had suffered a severe sexual trauma. He was walking on the edge of the forest when a well-dressed man accosted him, and on some pretext or other enticed him into the forest. At a lonely spot the man suddenly stopped, took hold of the boy, unbuttoned his trousers, took out his member and put it into his mouth. The terrified boy could only imagine that he intended to bite it off. At this the man exposed his own maximally erected member and told him to take it into his mouth. However, he managed to break loose and run away. The man had told him all sorts of things; he need not be frightened; there was nothing to be afraid of; he had only a little member; the man had a big one; when he was grown up his own would be as big. It was from this incident that his sausage phobia dated.

A second trauma, more harmless though it startled him greatly, had occurred three years earlier. Max had then been staying at a health resort in the mountains with his mother. One night he was suddenly awakened by a sound at his bedside, and saw a man of about fifty standing before him, who kept on holding his pocket torch in front of his face. The man was evidently drunk. He did not do anything to the boy; nor did he speak; he merely stared at him fixedly and flashed the light on his face. The boy jumped out of bed and ran to the door,

but it was locked; however, he found the key on the floor, so that he was able to open the door and take refuge with his mother, whose room was opposite his own. He did not tell his mother what had happened, but pretended that he had had an attack of nocturnal terror. His dread of burglars dated from this incident. But that this anxiety was not, of course, a real anxiety—that is, the boy was not afraid of a real burglar—is evident from the more than curious precautions which he took in order to safeguard himself against the dreaded eventuality (looking into the commode, etc.). The analysis, in this case, however, did not show that the dread of burglars concealed a strong repressed desire for a (homo-) sexual experience. Yet this connection seems to be generally accepted, even by the popular humorists, as we see from the jesting anecdote of the old maid who for years had always looked under her bed before retiring. When one night she actually found a man under her bed she cried: "Oh, there you are at last—I've waited twenty years for you!" On the other hand, the analysis proved that the "dread of burglars" was partly determined by the boy's moral superego; namely, by the dread lest someone should surprise him at his secret sexual play, as you will see from what follows.

During the same holiday at the health resort other things had happened which preyed upon his mind. With other boys he had built little houses with haycocks, which after dark were lit up with lanterns. One of the haycocks caught fire, and there was a little conflagration. Since then he had been afraid of fire. Behind this further material came to light; the boys had played also other less innocent games, including the so-called "doctor game," at which he had been the instigator and had seduced the others. Sometimes this game resulted in reciprocal exhibitionism and mutual masturbation, which the boy had afterwards continued with his schoolmates. In the course of the analysis it emerged that the "doctor game" went back to a much earlier period; when he was only three years of age he had played it with his playmates, and once they had been caught at the game by the mother of one of the children, and there was a tremendous fuss. There had been two little girls among the children, and on this occasion he saw the female genitals for the first time and realized the absence of the penis. After being punished on this occasion he had suffered from stuttering for some time, and he remembered that he stuttered more especially over the explosive consonants (b.p.). Then it occurred to him that the "doctor game" had been centered largely on the *popo* (buttocks); that is, it had a strong analerotic coloring. He confessed, finally, that since those early years he had formed the habit of playing with his member in bed at night, and that he had continued to masturbate until about nine months before the analysis. He had then made a sudden heroic resolution to give it up, because he was afraid he would be punished by failing in his examination. We now understand his examination anxiety and the sudden, acute aggravation of the rest of his phobias while he was preparing for the entrance examination, partly in consequence of libidinal substitute formation; that is, as the secret dread of the consuming fire of his unruly sexual impulses.

But at the center of his neurosis was the incident with the man in the forest, two years earlier. Over and over again he recurred to this, and could not find words adequately to describe the imposing size of the man's penis. Since then he had seriously imagined that this maximal state of erection was the normal

condition in the adult male. For some time now the boy had had the feeling that his penis was too small—at any rate, smaller than that of any of his comrades; he had noticed that during the swimming lessons at the baths. Since that trauma in the forest he had anxiously avoided allowing his genitals to be exposed in front of his comrades; indeed, as we have seen, he extended this prudishness even to his own mother. At the same time, since then he had betrayed increasing signs of a feminine attitude, which resulted in his incapacity and weakness as a gymnast. Two months before this, when the preparations for the entrance examination had begun, he unfortunately suffered a contusion of the testicles, a football having been thrown violently at his genitals. He was now convinced that he had suffered a serious injury to this important part of his body, and he despaired, once and for all, of ever becoming a man; that is, of ever having so huge a member as the man had possessed. Various threats of castration had co-operated in producing this despondency; he now remembered them one by one; from the first severe punishment suffered at three years of age to his schoolmates' tales of the injurious effects of masturbation. It came out that the boy, although he had been repeatedly enlightened, evidently had not accepted these explanations or had subjected them to a secondary repression. He still clung convulsively to a number of abstruse infantile sexual theories; amongst others, the theory that the woman also possessed a penis. In this connection, he declared repeatedly that he did not want to grow up—i.e. to be a man; he was afraid "of it." In dreams, which he related during the analysis, the vagina was quite definitely identified with the mouth, and he always woke out of these dreams in a state of extreme anxiety. He himself finally recognized that he was really afraid that the woman would bite off his member—already too small—with her aggressive vagina, and so mutilate him. In short—we see that at the bottom of this phobia there was a tremendous castration anxiety.

From this point onwards a number of his phobias are readily intelligible. After the incident in the forest the boy's "male ideal" has suffered a serious blow. He now consciously declined the masculine role. His sudden weakness as a gymnast simply meant: "This is not for you; you can't do this, for you are not a man and will never be one. And all further efforts to achieve physical efficiency are useless as long as the chief requirement—the correspondingly large penis—is lacking!" Even his examination anxiety derived in the last resort from this source; he did not want to go to the gymnasium and matriculate—that is, attain virile maturity. Finally it emerged that this attitude had been unconsciously encouraged by his mother, for she had repeatedly said that it was a pity he was growing so big: "Mama prefers little children; she often said I was already too big for her. She told me that after I came my sister imagined that she was forsaken, and stamped her feet with rage if they made too much fuss of me." Even his headaches were finally derived from the castration complex; he himself realized that by them he meant to say that he lacked the main thing (*Hauptsache*—lit. "head or capital thing")—that is, virility—and once he even said, suddenly: "I do believe with the whole of my illness I am simply continuing the stupid old 'doctor game'; I have to keep on going to the doctor!" Here he became conscious, too, of the considerable epinosic gain which he derived from his sufferings, for he said one day: "I believe I am simply too lazy to make an effort and become a man; it suits me much better to let Mama go on taking care of me and making much of me."

But his original longing for virility was, of course, by no means liquidated; it was only repressed. It continued to operate in the unconscious, and struggled, as before, toward fulfilment. It anchored itself on the picture of the great erected penis which had been seen two years earlier, and in subsequent compliance with the obscene demand of the seducer his libido regressed to that early pre-genital phase when oral seizure through biting was still in the foreground. But this obscene desire could not achieve consciousness, since it belonged to the primal repression, and could emerge only indirectly, in the neurosis. Here one of his numerous symptom formations commenced: the repressed wish was transformed into disgust; that is, it underwent conversion into the contrary. At the same time a displacement of affect took place, inasmuch as the repressed wish affect connected itself with quite a different and innocent object—the sausage—which had a purely superficial similarity of shape in common with the original object; so that the latent content of this sausage phobia, retranslated from the dreamlike archaic unconscious, would have been something like this: I want to gain possession of the great penis (through eating, biting it off)—but such things are disgusting!

The virile protest, however, broke through in yet other phobic symptoms: As you heard, Max was always afraid in a motorcar if he was sitting in the back of the car with feminine members of the family; while his anxiety (and also, incidentally, his headache) vanished if he was allowed to sit in front with his father. He told me, further: "If I sit in the back with the 'women' I feel womanish myself. But if I can sit in front with Papa I have the feeling that I am able to do something. For example, I can apply the handbrake, or give signals, or study the map (Papa generally goes by the map, only he occasionally doesn't believe me)." And he told me proudly that recently, while they were driving over the Klausen pass, when a "bull" refused to make way for them, he had leant out of the car and seized it by the horns and pushed it away: "I thought to myself I was like Jason. To seize the bull at the horns—that meant I was strong, and equal to the occasion." He confessed that he had recently read of the doings of the Homeric heroes with positive intoxication; he had read the Iliad at least ten times, and had always imagined himself in the role of Achilles: "He too was disguised as a woman and hidden among the women, so that he need not be a warrior, and yet in the end he became a hero!"

The fear lest his father should meet with an accident was finally explained, through a dream which took him back to his earliest childhood, and his parents' bedroom; and to the experience of the primal scene, when he witnessed or overheard the coitus of his parents. The analysis did not succeed in bringing this experience into consciousness in its primary form; on the other hand, the boy was clearly conscious of his jealousy of his father, and it also became obvious to him that a number of his symptoms, such as the dread of bridges, the headache, the fear of fire, were connected with these impulses of jealousy, and that by these symptoms he was punishing himself for his wicked wishes (that his father might not return from a journey). For once, when he had come home from school, and his mother, when he asked where his father was, had replied that he had gone on a journey, the words "Thank God!" had involuntarily escaped him, whereupon his mother had vigorously reproved him. His father had made the mistake, since his illness, of treating him as inferior, and had often allowed the boy to become conscious of a certain contempt in his attitude.

He had thereby affronted his masculine pride, his narcissism, which in this handsome boy, as was constantly emerging in the analysis, was very prominent. These affronts contributed to force him still further into the passive-feminine attitude, for he was able to tell himself that in view of his physical advantages he would still have a good chance of success in this role. He therefore made a virtue of necessity and no longer seriously tried to find the way back to virility. As a matter of fact, he repeatedly said that he really envied his sister—the girls really had a much better time; they didn't have to exert themselves to amount to something—if they were pretty they would have a good time without that. On the other hand, he was as a matter of fact aware that by such an attitude he was diverging in a disastrous manner from his primary masculine orbit; he hated himself for this, and often cried out, for example: "It's disgusting, what an ape I am—I have to gaze into every looking-glass!"

The material of this analysis, in so far as it can be represented within the limits of a lecture, ought to enable you henceforth to recognize the bathypsychological structure of a phobia as against that of an hysteria.

In the classic conversion hysteria, as we have seen, the instinctual affect as such—that is, the affective representative of the instinct—is repressed. Its object representative, on the other hand, is often still capable of becoming conscious, yet on account of the withdrawal of libido it has become affectless (which is why the object representative of the instinct is in most cases no longer "known" as such by the hysteric).¹ The result is the conversion of the affect into a physical symptom, which represents a displacement substitute for the symbolical gratification of the desired (forbidden) wish impulse, and also for the opposing tendencies of the superego.

In the phobia, on the contrary, the affective representative of the repressed instinctual impulse is retained as affect, at least in form. The affective charge has not transformed itself into a physical symptom; nevertheless the primary instinctual affect has been changed, converted, into another and usually a contrary affect: thus, pleasure

¹ In the Old Testament the word "know" is used to denote coition ("and he knew her")—yet another indication of the fact that the full significance of an object is not recognized unless recognition comprises the instinctual attitude to the object. A similar instance was mentioned in the first Lecture (p. 23), where we alluded to the fact that the stag "knows" the hind as a female only during the rutting season. There is a great deal of evidence that the hysterical repression of affect is at the bottom of the same inhibitory process: The withdrawal of libido from an erotic object has the final result that the presence of this object can no longer release libidinous excitations in the diencephalon, so that the hormonal discharge which would follow in the case of normal libidinal cathexis, and therefore the secondary erotizing of the cerebrum, does not take place.

is converted into anxiety, desire into aversion or disgust. But secondly, *this converted affect has detached itself from its original object and has attached itself to a symbolical substitute object or situation*. Or, to put it briefly, a displacement of object has occurred.

The chief difference between the mechanism of the classic hysteria and the anxiety hysteria or phobia is this: *in the phobia the transformation of affect has remained in the sphere of the psychic*. Hence *the symptoms of the phobia are mainly psychic*: the appearance of anxiety, feelings of disgust, etc. is conditioned. In so far as physis symptoms appear in the phobia (palpitation of the heart, breathlessness, vomiting, diarrhea, etc.), they are of course not primary, as in anxiety neurosis, but simply the secondary consequences of the anxiety which naturally evokes the corresponding sympathetic reflexes.

Since the anxiety in the phobia is not primary—not conditioned by endocrine discharges, as in anxiety neurosis, but is always related to definite objects or situations, which represent the repressed objects or situations in the consciousness, so the phobic anxiety appears only on quite definite and individually acquired occasions: namely, only under the condition of the appearance of the dreaded object or the occurrence of the dreaded situation (displacement substitute for the primary instinctual object). Thus, this displacement substitute constitutes the signal or symbol for the appearance of anxiety—or, we might say, the individual condition of anxiety. In no other psychoneurosis do we see the liberation of the symptoms by the mechanism of the conditioned reflex so clearly revealed as in the phobia.

If we now once again consider the various examples of phobia presented by our twelve-year old patient from the standpoints which have just been elucidated, we see that his symptoms can all be classified as follows:

First the sausage phobia: We saw that the sausage actually represented a transparent displacement substitute for the image of the intensively erected penis of the seducer. We saw, too, that the original object was repressed (the incident recurred to the boy only in the course of the analysis, under strong resistance). Further, the positive affect, which had originally attached itself to this "phantom"—namely, the wish to become possessed of the great penis by biting it off, which arose from the primal repression in response to the

man's obscene demand—this affect was transformed into its contrary, namely, into aversion and disgust. That this desire, which endeavored to overcome the dread of castration, was incapable of becoming conscious on experiencing this situation, is not only explained by the fact that it belonged to the primal repression, but is also assuredly connected with the fact that during this scene the castration anxiety itself was violently evoked, for the boy could only think that the man wanted to bite off his penis.

The dread of gymnastic exercises showed itself plainly in the analysis as a dread of the tasks of manhood; the desire to achieve man's estate had become repressed after the incident in the forest, and was transformed into dread of every kind of test of manhood, for since then the boy despaired of ever becoming a man—that is, of ever acquiring so large a penis. His dread of examinations also is derived directly from the same service. In both cases the repressed wish for virility, transformed into anxiety, had attached itself to readily deciphered symbolic situations, which appeared in the place of the situations which were really dreaded, namely, in the last resort, the test of his manhood: He did not want to "grow big"; among other reasons, because he was afraid that he would thereby lose his mother's love; so he did not want to practice gymnastic exercises which would make him tall and strong, and he no longer wanted to take the entrance examination for the gymnasium, and afterwards to matriculate—that is, reach the stage of masculine maturity: in short, his masculinity was repressed and had given way to a passively feminine and infantile attitude. Characteristic of this attitude was a detail which has not yet been mentioned: the boy told me one day, sulkily, that his father always wanted to force him to have his fair locks, which his mother liked so, "broken in" and to have a smooth poll, but he himself found his curls much handsomer! (At the same time, we know that any normal boy who has the "misfortune" to possess a head of curls makes every conceivable effort, on reaching a certain age, to get rid of this ornament, which he regards as "womanish," and indeed to destroy it.) That the repression of the masculine desire was ultimately enforced upon him by an extreme dread of castration which he had harbored for years was plainly indicated by a number of associations, which attached themselves, among other things, to typical dreams: for example, he once dreamed that he was

traveling by rail and entering a tunnel, which really ran through an enormous hedgehog. He was terribly frightened, but at the last moment he was able to jump out. Afterwards he heard that twenty Italian airmen who were in the first carriage were burnt to death in the train, which had been derailed in the tunnel. Perhaps this dream hardly needs a commentary. The hedgehog (*Igel*) reminded him immediately of hoggishness (*schweinigeln*—to talk smut), and this in turn of the rather crude sexual enlightenment which he had received some years earlier from a schoolmate, and which he had hitherto completely repressed. He remembered now that he had thought at the time that this was a monstrous *Schweinerei* (piggishness), and also dangerous; he would never do such a thing! We see exactly the same structure in the rest of his phobias. Thus, the dread of conflagrations took the place of his dread of his own bad and sensual instincts, and forthwith represented them in the boy's consciousness—a "transposition of the battle front from within to without," such as we constantly encounter in the phobias—but also in obsessional neurosis. The displacement of the anxiety in respect of the inner instinctual danger to the dread of fire was facilitated by verbal usages: one speaks, for instance, of "fiery passion," "playing with fire," etc.

Even in the animal phobias the general structural mechanism which has just been described can as a rule be detected. In our young patient they played only a subordinate part; still, even in his case the beginnings of animal phobias could be clearly recognized. For example, he had a morbid loathing of slugs and snails, which he explained by the fact that he had once found a tiny slug in his salad, since when he could not eat salad. Further associations led directly from the slimy nature of the snail to repugnance to the female genitalia, which he had once touched in the case of a nursemaid who was masturbating him. But let us take another example of an animal phobia which is more representative of the type, inasmuch as the characteristic anxiety is more conspicuous:

We know that there are women who have a crazy and utterly unjustified dread of mice. They shriek loudly when they see these harmless and timid little creatures, and flee blindly—preferably climbing on to a chair, when, strangely enough, they pull up their skirts as high as possible—allegedly, so that the mouse cannot jump

into their clothing. The analysis of such mysophobias always shows that the victims are frigid women who really regard the penis with fear and repugnance; ultimately because at one time, as children, they were painfully aware of lacking this organ, and therefore unconsciously harbored, until they reached maturity, the envious longing to possess it. In consequence of this unconscious and repressed penis-envy, or rather penis-desire, they were reluctant to play the feminine role. Since the penis-desire or penis-envy belongs to the primal repression—that is, since it dates from early childhood—its only way of manifesting itself is by the circuitous route of symptom formation: the conversion of the instinctual affect into its contrary, into anxiety and aversion, and object displacement—that is, the displacement of the thus converted instinctual affect upon a symbolic substitute object. The mouse, on account of its shape, and its habit of slipping into holes, is a primordial symbol of the penis.

You see: The anxiety objects or situations of the phobic have always a certain—though purely external and superficial—similarity to the actually dreaded primary instinctual objects or situations; it is only on account of this similarity that they can represent the latter in the consciousness; that is, become symbols of the real instinctual danger. The acquisition of these symbols occurs over the archaic, identifying, symbolic-sexual infantile thought below which are the primary processes in the unconscious. If, as we saw, the sausage and the mouse are equivalent to the penis and the slug to the female genitals, or if the dread of a railway accident symbolizes the dread of a sexual “disaster,” we see just the same laws at work as those which govern dream-thinking and the waking thought of the primitives (think once more of Winthuis’s *Gunantunas*). At the same time the animal phobias seem to reveal a clear phylogenetic regression to the intellectual level of the primitives, inasmuch as the phobics regard their “anxiety animals” with a superstitious timidity that closely resembles the attitude of savages in respect of their totemic animals (Freud). It has already been said that phobic dread is in the long run inaccessible to reasonable argument. Any attempt to “talk the phobics out of” their anxiety is generally useless, or has only a temporary success. After what has been said you will understand why this is so, why it could not be otherwise. Since the anxiety object is only a substitute object, which represents the actually

dreaded instinctual danger, all efforts to explain to the patient, logically, that this displacement substitute is harmless, are naturally ineffective unless one can make him conscious of the real object of his dread, and either dismiss it, or prove convincingly the harmless nature, or indeed the unreality, of this imagined peril. But all our arts of persuasion, if they were to deal only with the displacement substitute, would merely have the result that the symbol would be changed; that is, that the patient would finally abandon the anxiety object, but only to choose in its place a new object or a new situation as a displacement substitute for the unconscious instinctual danger. Even in their spontaneous progress the phobias display a striking tendency gradually to extend themselves to new objects or situations. This factor explains why in the course of time new objects or situations appear casually in association by contiguity with the phobic contents, and so, in accordance with the law of engraphy, are incorporated secondarily in the phobias.

Thus, I was once consulted by a hairdresser who for some months had been suffering from a severe and uncontrollable phobia; he could not bring himself to shave elderly gentlemen. The phobia had begun quite suddenly one day, as he was shaving such a customer. From this time onwards he could no longer attend to this customer himself, but found himself compelled to invent a series of pretexts for handing him over to his assistant. But with this he had by no means got rid of his phobia. For one day, just as he was shaving a second old gentleman, the first customer, his primary object of anxiety, entered the shop, whereupon he had a second attack of anxiety, and from this time onwards he could not shave this second customer. In this way his phobia gradually extended itself to other customers—finally, to twenty—and since these customers were precisely the local bigwigs, he found that his business was seriously threatened, and was at last compelled to seek aid from a neurologist.

Lastly, I must allude to a factor which you can very clearly distinguish in all the various phobias which have been mentioned: namely, regression. We always observe that the phobia makes its appearance when an instinctual activity is suddenly interrupted in its further course by an internal refusal. As a rule, the libido then regresses to an ontogenetically older, obsolete, early infantile stage, which is plainly shown by the anxiety objects or situations which are

sometimes chosen. For example, the dread of animals, the dread of fire, the dread of tunnels etc. are typical infantile anxieties, and it can usually be shown, in cases where such phobias affect adults, that phobic shocks were experienced in childhood. Thus, the phobia always attaches itself to an old infantile anxiety. In our twelve-year old patient we saw this regressive factor appear very conspicuously in his sausage phobia, when the libido regressed to the early infantile oral phase. Further, the repression of his masculinity, which led to a passive-feminine, or rather, an infantile attitude, reveals itself plainly as a regression to very early childhood, when the mother's loving care constituted the main content of the infant's hedonic instincts. You see, too, that regression in the phobias often goes back to the early infantile phase of the pregenital sexual organization. On the other hand, in the classic conversion hysteria the regression does not, as a rule, go back to such an infantile stage of libido-organization, but generally stops at the genital stage—that is, at a stage of development in which the genitals had already attained to primacy. And here, above all, earlier erotic objects are regressively recathected with libido. We might put the matter thus: we might say that the "fixation point" is generally found in an earlier developmental stage of the sexual organization in the phobias than in hysteria.

Before we conclude, we must mention certain secondary resultant phenomena which in phobias of long standing generally become more and more conspicuous in the foreground of the clinical picture. I am referring to the so-called avoidances. The patient who is afraid of a definite object or situation naturally and instinctively seeks to avoid the object or situation in future, since on this condition he is free from anxiety. This has, however, one disadvantage—that he is gradually more and more restricted in his freedom of movement, since the phobia, as we have seen, shows a tendency to extend itself gradually to more and more objects and situations. Thus, it may finally happen that the unfortunate patient can no longer take part in the majority of social activities (can no longer go to church, visit the theater, attend concerts or assemblies, take part in excursions or festivities of any kind, or indulge in sports or games, etc.), so that he finds himself increasingly compelled to lead a retiring, joyless, hermit-like existence.

Nineteenth Lecture

Symptom Formation in Obsessional Neurosis

Ladies and Gentlemen:

In the last lecture we dealt with the psychology of the phobias. We have seen that the phobia is a form of psychoneurosis whose structure differs in essential respects from the structure of the classic hysteria; firstly, here it is not the compromise between the mutually incompatible demands of the Id and the superego, but the defense against the primordial instincts arising from the Id that occupies the foreground; and secondly, the affect of the primordial instinct ward off remains in the psychic sphere. Under the pressure of the repression it has undergone conversion into anxiety, and the anxiety has attached itself in a secondary manner to a substitute idea, whereby the original instinctual anxiety has been transformed into an apparently real fear.

These two criteria: the predominance of defensive processes and the persistence of the repressed instinctual affect in the psychic sphere, hold good also for the third great psychoneurosis, the most enigmatic and obscurest of all; namely, for obsessional neurosis. We might therefore do as Freud proposed in one of his earliest psycho-analytic works: we might contrast the phobia and the obsessional neurosis, in respect of these essential structural characteristics, with the classic conversion hysteria, and include them under the common description of *defensive psychoneuroses*. The decisive difference between the two forms of defensive psychoneurosis lies in the manner in which the defense is effected; in the phobias it is characterized essentially by anxiety and flight, while in obsessional neurosis we find in the foreground a far more complicated defensive process, which we have not yet encountered in the neuroses: namely, reaction-formation. What we understand by this will be immediately clear to you when we have studied the nature of obsessional neurosis in a concrete case from our practice. Unfortunately, however, I cannot offer

you a relatively simple example, whose minutiae are easily perceptible, as was possible in respect of those forms of neurosis which we have discussed up to now, because in obsessional neurosis we are dealing with an extremely complicated formation, whose analysis generally takes a good many months. I therefore cannot attempt to expound the case as it gradually developed in the course of the analysis; I find myself compelled to represent it in a more reconstructive manner: that is, I can merely give you the final results of the analysis which lasted over a year.

The patient was a girl of twenty, a young foreigner, who since her eleventh year had suffered from a number of obsessional symptoms which included compulsive thinking as well as compulsive actions. A pathological heredity existed in respect of both parents. The patient's father, sixteen years older than her mother, had married late in life, and suffered from slight obsessional symptoms. He was described by the patient as extremely pedantic in all his doings, and he seems to have been what the psychoanalysts call an "anal character." One of his sisters had been suffering for years from a severe obsessional neurosis; in this case too there was direct inheritance. The mother had suffered at times from slight hysteriform symptoms. One of the mother's sisters had to be interned in a lunatic asylum on account of schizophrenia. The patient's only brother, three years her senior, was a nervous subject: as a boy he suffered for a long period from an eye-tic (blepharospasmus).

Our patient had developed quite normally as regards her psychic life until she was sent to school; as a child she is said to have been joyous and even exuberantly cheerful. But while she was in the second class of public school (which she had to attend at the desire of her father, who, although he was very well off, lived a Spartan life and tended toward extreme democratic views) the later neurosis announced itself in the form of persistent insomnia. At the same time the child became noticeably quiet and shy, withdrawing herself from all her schoolmates. A specialist in children's diseases advised that she should be removed from public school and sent to a private school. This advice proved disastrous: in the new school the child felt even more unhappy than at the public school. Above all, she soon developed acute feelings of inferiority in respect of her schoolmates, who in her opinion were all better dressed than she, and, according to her, looked down on her superciliously. She could not rest until she was taken away from this school also and sent to a second private school. There she came under a master whom she described as a frightful pedant; not only in that respect, but in his outward appearance, he reminded her of her father. She both feared and loved him—she conceived a strongly ambivalent love-hatred for this schoolmaster.

About the same time, in her tenth year, something happened that made a profound impression on her: one day, when she was lying in bed, as she was suffering from a cold, and her parents had gone out, her brother, who was three years older than she, came into her room, enlightened her sexually, and fingered her genitals. She saw his erected member. He induced her to touch it and finally attempted actual coition, but without success. He had said that they

would now do to one another what their parents did. From now onwards these secret sexual practices were repeated almost daily for some six months; both children contrived to arrange matters so that they were not detected. One day, however, her brother gave up the "game," mounting "the high horse" and explaining that it was no longer proper for him.

From this time onward the girl developed an obsessional neurosis. It began with a washing obsession. The child had to wash her hands at least twenty times a day, particularly after every contact with a boy; yet this compulsive washing afterwards extended itself to every possible kind of situation.

At the same time the patient's attitude toward her parents underwent a change. This change first affected her attitude toward her father. While she had previously been greatly attached to her father, she now suddenly became extraordinarily reserved with him, and withdrew from his caresses in a conspicuous manner; indeed, it now looked as though she regarded him with positive aversion. She hardly ever spoke to him and avoided him as far as possible. She even introduced this negative attitude toward her father into the analysis; thus, during the first three months she hardly ever mentioned him, while she very soon confessed to her childish experiences with her brother. And if she did happen to speak of her father she did so only in language which expressed the profoundest aversion, and she never failed to add that her father meant nothing to her.

On the other hand, she manifested a quite exaggerated love for her mother, which went so far that since her eleventh year she had insisted on getting into bed with her every night. She persisted in this curious habit even to her twentieth year. She alleged that she would not sleep unless she had first gone to bed with her mother. As a rule she remained with her mother only until her father too had gone to bed, and until she realized, from his deep, regular breathing, that he had fallen asleep. But until her father was fast asleep she could not be induced to leave her mother's bed; she desperately resisted every attempt to transfer her to her own bed before this happened, so that in the end she had to be allowed to have her way. Only when her father was away traveling did the compulsion abate, or disappear completely for the time being. Before leaving her mother she always performed a peculiar farewell ceremony, which culminated in a long good-night kiss. But she did not give this farewell kiss immediately, for every time her lips were nearly touching her mother's lips she drew back, as before something unspeakably repulsive, and then approached her mother again, only to start back once more, and this trick of advance and withdrawal was repeated perhaps twenty times until she at last succeeded in bestowing the kiss. But even then she was not at peace: after she had returned to her room she had to close the window, carefully, three or four times, or open it again and very consciously close it once more, for a murderer might climb up from outside and slip through her room into her parents' bedroom, and kill her mother. Further, her whole bed had to be most carefully searched for pins which might somehow have found their way thither. She had also once more to make sure that her clothes on the chair at her bedside were tidily arranged. When this was done she had to look once more into the corridor, to make sure that the light was extinguished; and this too she had to do several times. Since she had, of course, to open and close the door every time, the obsessive notion formed itself in her mind that through her fault a fly or

a spider might get squashed in the chink of the door, and this called for several more painfully minute examinations before she had at last convinced herself that it was not so. Then, when at last she was in bed, she had to listen with bated breath before falling asleep, trying to hear whether her mother was still awake in the next room, whether she cleared her throat, or coughed; in short "to hear whether Mother was still giving any signs of life."

At the same time, or a little later, the patient began to suffer from curious obsessive thoughts. When she came to an interesting passage while reading—especially if it were sensually exciting—or when she tried to play on the piano a passage that especially pleased her, or when—later on—she thought of a young man who had aroused her interest at a public dance—then always, immediately an obscene, intrusive idea rose into her consciousness and disturbed her thoughts; the idea of the penis of the pedantic schoolmaster at her third school. This obsessive thinking persisted unchanged even during the analysis. It was particularly painful to her, and she sometimes had to suppress it by exerting all her will power before she could continue her reading or playing. If she were to break the law—for example, if she were simply to go on reading before she had chased away these distressing obsessive ideas—her mother would die, or meet with an accident, and she would then be guilty of her mother's death. Later on it emerged that she had also connected the idea of insects crushed in the door with her mother's death.

These obsessive ideas and obsessional avoidances extended themselves subsequently to all sorts of other things, to anything that could somehow enter into a conscious or unconscious associative relation to the death fears centered upon the mother. For example, for several years, whenever the patient crossed a bridge, she had to take from her finger a certain ring which her mother had once given her, throw it into the air as high as possible, just over the parapet, and catch it again. Woe, if ever it should fall into the water!—for then her mother would be lost!

The interpretation of this typical case of obsessional neurosis is for the expert as easy and obvious as the analysis was tedious and difficult.

It is evident that the child, with her congenital nervous debility, had originally felt an excessive affection for her father who thoroughly spoiled her. Proofs of these facts emerged at several points in the analysis; for example, it appeared that in her early childhood the girl had made an almost daily practice of getting into her father's bed (mostly in the morning), just as she afterwards had to go every night to her mother's bed. On these occasions she had repeatedly felt a hard object on her father's body, which can hardly have been other than his erected penis. Through the untimely and inconsiderate enlightenment which she received from her brother she learned for the first time what her father did with her mother. The Oedipus complex, already strongly developed in her, received

through this premature knowledge a sudden enhancement; that is, it evidently aroused in the little girl the longing that her beloved father would do with her what he did at night with her mother. As long as she had a substitute for him in her brother all went well enough; the Oedipus desire remained for the time being latent. Only when her brother preferred to have moral scruples and suddenly withdrew from her were the conditions fulfilled by this refusal of regression, and of the outbreak of the neurosis. For now the Oedipus wish, reverting to the original object—the father—collided at once with the insuperable barrier of morality. It could therefore assert itself only indirectly—that is, in neurotic symptoms. The repressed wish, prevented from entering the consciousness, was at first displaced upon a substitute object. An eminently suitable substitute was the schoolmaster for whom the child, in her later years at school, had felt that remarkable hate-love, for in so many little ways he resembled her father. With the help of this father-imago the Oedipus wish could now irrupt into the conscious, and it is interesting to note that this irruption did not introduce the general idea of the object representative, but the wish attached itself only to a single—and for that reason, all the more important—part of the object, which thereupon became a symbol of the whole. Hence the ever recurring, obscene fantasy of the schoolmaster's penis, which at every opportunity forced its way intrusively into all the patient's pleasurable emotional experiences, destroying her *joie de vivre* by its distressing nature. This direct return of the repressed in a barely disguised form—here only in the form of a very transparent displacement substitute, a substitution, which nevertheless retains the most essential feature—is a process entirely characteristic of the obsessional neurosis. In no other neurosis do symbols of such immediacy occur; we find ourselves approaching the verge of psychosis, in which the contents of primal repression itself irrupt without concealment. But in a second formation the positive Oedipus wish is discernible, although in a strongly distorted form; namely, in the obsessive idea that a "murderer" might climb up to the girl's bedroom window and creep into her parents' room and attack her mother. The analysis showed that the obsessive idea was originally a phobia, whose content was a peril threatening the patient herself. In the primary conception the patient was afraid that the murderer might attack

her, and her further associations clearly revealed the fact that the "murderer" was originally her father. The compulsive action—the obligation to ascertain, three or four times over, whether the window was closed—was originally the reaction to the wish that the father would come to *her*, would enter *her* room at night, and not her mother's. This became quite clear when I learned that both her parents' room and her own opened on to a common terrace; so that her window was really a glass door—a "French window." The compulsive action of inspecting, three or four times, the doors giving on to the corridor was a reaction against the positive Oedipus wish and acquired only secondary relations to the mother. This was clearly indicated by the connection between this door-closing obsession and the watching for the light in the corridor; if the patient's father returned home late at night he naturally switched on the light in the upstairs corridor and the patient saw the light glimmering through the chinks of the door. As long as this light was burning there was always a possibility that her father would come into *her* room. The patient had to secure herself against this possibility through the obsessive action of inspecting the doors.

Quite in a general fashion the primary defense of her positive Oedipus tendency served also to effect the complete withdrawal of the patient's conscious libido from her father—that is, from the real and primary erotic object. This total withdrawal of libido, in consequence of which she now regarded her father with complete indifference, indeed with negative and hostile feelings, was on the one hand the result of the transference of the libido-quantum in question to the neurotic substitute object (the schoolmaster's penis) and on the other hand the result of the attachment of the relevant emotions to the defense mechanisms which now continually demanded all her attention.

No less disqualified for consciousness than the positive Oedipus tendency—indeed, actually still more unqualified—were the negative expressions of the patient's Oedipus complex—the jealousy and the death wishes directed against her mother. These negative sentiments were at first repulsed, like the positive Oedipus wishes, by the transformation (conversion) of the affect of hatred into its contrary. In proportion as the patient withdrew her libido from her father, so that as far as he was concerned she became more and more affec-

tively impoverished, and even treated him with contempt, she henceforth displayed toward her mother, originally her hated rival, a fantastically exaggerated tenderness and care, a tenderness that went so far that she alleged that she was unable to sleep unless she had first spent at least half an hour in bed with her passionately beloved mother. However, it soon became clear that behind this extremely disturbing compulsive behavior there were concealed impulses of the most violent jealousy. For with this compulsive behavior, which she continued into her twentieth year, she had organized an extremely efficient system of supervision over her parents' relations—that is, she was an obstacle to marital intercourse between her parents. That this was the original significance of this compulsive behavior is proved beyond a doubt by various details: for example, the patient would not leave her mother's bed until she was convinced that her father was asleep; also the circumstance that the obsession was essentially weaker or even completely absent when her father was out of the home or on his travels. Further, jealousy could be clearly discerned in the fact that the patient, when she had at last returned to her own bed, often had to listen for a long while in order to make sure that her mother, in the next room, was still breathing. This listening was consciously dictated by the fear lest her mother should die during the night; but originally this compulsion to listen indicated nothing more than a barely concealed spying upon her parents' intimate relations. And when she carefully closed her window at night, so that no "murderer" should force his way to her mother through her room (!), this obsession was doubtless originally a reaction against the unconscious positive desire that her father should come, not into her mother's room at night, but into hers. Only subsequently did this compulsion prove of service in repelling the unconscious wish for the mother's death. It was the same with the door-closing obsession and the watching for the light in the corridor. These obsessions had originally referred to the father, and were then primary defense reactions against the urgent, positive Oedipus wish. On this account she had always to look a second time, to make sure that the door was really locked, so that her father could not enter her room. On the other hand, the positive Oedipus-wish was always compelling her to repeat the door-locking ceremony, inasmuch as the patient had to keep on opening the door (to her father)

in order to lock it again "consciously." Only subsequently was her mother involved in this obsession; for behind the patient's obsessive fear that she might unknowingly have caught and crushed a fly or a spider in the crack of the door was concealed nothing less than the unconscious wish for her mother's death, here displaced "upon a trifle," namely, upon familiar "mother symbols." If at last the patient was unable to persist in any pleasurable activity until she had repressed from her consciousness, or isolated,¹ the obscene imagination of the penis of her former teacher (the father-*imago*), this compulsive inhibition was evidently not only of service in the defense against the positive Oedipus desire, but it was of equal service in the defense of the ambivalent counter-idea—that is, the unconscious death wish directed against the mother. You see, further, that in our patient's case it proved, on the whole, that the mere repression of the positive and negative Oedipus tendencies and their replacement by an anxiety object or a harmless displacement substitute no longer sufficed to prevent the threatening irruption of the instinctual desires in question into consciousness; they were too intensive to be disposed of in this manner. This is especially true of the repressed death wish directed against the mother. Here, then, another and more active form of defense had to be instituted; it intervened in the shape of reaction-formation. The patient's obsessive fears that her mother might die cannot be explained merely by the repression of the death wish which the patient cherished against her mother (as rival), but were evidently already the result of an active anti-cathexis which the patient's ego opposed to the unknown demons of the depths. This anti-cathexis availed itself firstly of the early infantile love for the mother, which was, of course, still present. Hence the grotesque exaggeration of all expressions of affection for the mother, as seen in the persistent obsessive fears concerning the state of the mother's health, in the patient's demand to be allowed to get into bed with her every night before seeking her own bed, and above all, in the grotesque ceremony of the good-night kiss. All these obsessive ideas and compulsive actions served the defense against the evil de-

¹ This compulsion to isolate—that is, the endeavor to make partial irruptions of prohibited "drives" innocuous, at least, as regards their aftereffects—by isolating them from the rest of waking thought by a definite barrier is a characteristic feature of all obsessional neuroses.

sires which the patient harbored in respect of her mother, and also, ultimately, the defense against overpowering aggressive tendencies.

But behind these defensive reactions the repressed hatred is still everywhere discernible, threatening irruption. You see this especially in the tender ceremony of the good-night kiss, which was drawn out to such a preposterous length because aversion and hatred were constantly intruding amidst the tender feelings which prevailed on the surface of the consciousness. These impulses of hatred had first to be fought down and isolated before the kiss could at last be given.

You will also recognize the general structure of the obsessive symptoms as defense reactions in the compulsion to wash, which was, in fact, our patient's first symptom: It was evidently nothing more than a symbolic defense against the painful and therefore repressed feeling that the patient had morally "dirtied" herself by her "unclean" sexual relations with her brother. Subsequently this compulsion was generalized as a defense reaction against the feeling of moral uncleanness in general; hence its later extension to other situations.

In the course of time, however, all these defense reactions proved to be inadequate; the repressed impulses threatened again to break through, so that further safeguards, in particular against the irruption of the repressed hatred, had to be mobilized. These further safeguards the patient provided through the numerous active modes of compulsive behavior which she undertook in order to conjure "destiny," or more exactly, to appease her own moral anxiety. Indeed, she herself said: "If I didn't perform these ceremonies with painful exactitude my mother would be bound to die and I should be guilty of her death!" She thus made the occurrence or non-occurrence of the dreaded (and secretly desired) event henceforth dependent on her own actions. We see this very clearly in the throwing up of the ring on the bridge, which the patient, as you will remember, practiced when she was about fourteen years of age. This risky game, in which the patient threw a ring which her mother had given her high into the air above the parapet of a bridge could mean: "I should like the ring to fall into the water, when my mother would have to die (when my parents' marriage would be dissolved and I should have my father to myself)," or it could equally well mean the contrary: "I must do everything in my power to get the

better of my wicked wishes concerning my mother! On no account must I let the ring fall into the water!"

We see, then, that in the prolonged development of this severe obsessional neurosis the secondary reaction-formation against the recurrence and the dreaded irruption of the repressed matter governed the entire clinical picture. Almost all the obsessive thinking and all the compulsive actions play their part in this defense. In other words: The reaction-formations of obsessional neurosis can no longer be regarded, like the symptoms of hysteria, as merely a symptomatic compromise between the repressing instance and the repressed primordial instinctual impulses. On the contrary, the obsessive thinking and the compulsive actions serve primarily as a defense and safeguard against the threatened irruption of the Id-tendencies; they are the safeguarding reactions of the ego, enforced by the superego. Even the neurotic compromise, so far as such a thing is formed, is a compromise between the defensive process and the Id-tendency which has to be kept at bay.

We can therefore describe the dynamic mechanism of symptom formation in obsessional neurosis as follows:

1. In childhood a very strong and active sexual instinctuality prevailed, which was especially engrossed in conscious incestuous impulses (Oedipus complex), and which was repressed only at a comparatively late period.
2. The original self-reproaches on account of the forbidden infantile instinctual activity were repressed in their turn as too distressing to remain in the consciousness; they were displaced on to other, innocent, or at least less intolerable intellectual contents, often on to some utterly trivial misdemeanor, which is now absurdly exaggerated, because it has taken upon itself the entire affect which was originally attached to the grievous sin ("Displacement on to a trifle"). Thus, our patient told me, amongst other things, that even today she reproaches herself intensely for the fact that once, as a child of ten, being present while her mother was having a dress fitted, she appropriated some pins with brightly colored heads which the dressmaker had dropped on the floor, thereby "stealing" them from the dressmaker. The alleged "theft" represented in the patient's consciousness the repressed self-reproaches on account of her secret sexual indulgences with her brother. Now we understand why

the patient, even after the lapse of so many years, still had to search for pins which might have found their way into her bed linen. Even on this level reproaches are frequently transformed into reactive compulsive actions, which pursue the unconscious purpose of canceling the offense or atoning for it. Such compulsive behavior, for example, was the patient's compulsive washing, which represented a symbolic cleansing from the committed sins of incest; and such was the compulsive orderliness—that is, the exaggerated neatness—in arranging her clothes, for example.

3. In a second phase of development there enter into the consciousness of the obsessional neurotic impulses hostile to those persons who opposed or hindered the forbidden and repressed infantile instinctual activity or who at the present time represent an insuperable obstacle to the realization of the positive Id-tendencies. These hostile and aggressive impulses, in consequence of a constitutionally excessive disposition to sadism, acquire exceptional intensity, deriving their motivation from the Oedipus complex.

4. The hostile, sadistic impulses, since they are directed against a beloved person (in our case, against the mother), are repulsed with the most violent self-reproaches, and repressed, by the conscious ego. Here, however, the repression does not lead, as in anxiety hysteria, to displacement of libido on to a substitute object, but to conversion of affect into the contrary; that is, to reaction-formation through the exaggeration of the ambivalent contrary. This results in a peculiar ego alteration in the form of a conspicuous increase of conscientiousness; in short, of a morbid intensification of the moral counter-impulses. We saw something of this same pathological over-conscientiousness in the defense of the primary self-reproaches on account of the forbidden positive instinctual activities in childhood, as in the compulsive reproaches on account of the "pin stealing," the compulsive washing, and the compulsive tidying of articles of clothing. From all this we derive the impression that the obsessional neurotic is under the influence of an especially strict, inexorable superego, so that he is subject to a constitutional intensification of the development of the secondary impulses, together with an abnormally strong primary instinctuality.

5. For this reason, things do not usually remain static in such cases. The repression of the primordial tendencies, and above all

the aggressive tendencies, is not complete and permanent. Not only does the repressed sadistic affect constantly reappear in the form of conversion into moral anxiety, but it is always threatening to irrupt into consciousness, even in its original form. Against these instinctual dangers the patient has to mobilize new and more active safeguards, in the form of compulsive actions and compulsive ceremonies in which the outwardly projected instinctual danger is magically conjured as "the powers of destiny." Thus, our obsessional neurotic found herself bound "to do something" to avert the dreaded (yet secretly desired) eventuality of her mother's death; that is, to make this eventuality henceforth dependent on her own actions. It was as though she were constantly gambling with her mother's life; *she* could decide on her death, it depended on *her* behavior whether her mother lived or died. And the repulsed idea of the mother's death is here, as in other neuroses, represented in the patient's consciousness by a displacement substitute. Yet now this displacement substitute is no longer a mere idea; it takes the form of a compulsive action in which the repressed sadistic impulse, and at the same time the reaction against this impulse, are expressed in a compromise performance. In this compulsive action the two antithetical tendencies are weighed against each other and mutually compensated in the most ingenious manner. Think, for example, of the patient's trick with the ring on the bridge; here we see both tendencies, the devil and the reactive guardian angel, actually gambling for the mother's life or death. On the other hand, the original sadism finds a certain degree of direct satisfaction in the compulsive actions, for the patient could not ultimately evade the realization that by her numerous obsessions, under the disguise of excessive affection, she was distressing her mother, whom she was alleged to love so dearly.

If we now compare the way in which the instinctual conflict is here reduced with the analogous processes in hysteria and phobia, this is what we find: In hysteria, and also in phobia, the conflict is still entirely a conflict between the repressed positive tendencies of the primordial instinct and the incompatible demands of the super-ego. In obsessional neurosis, on the other hand, it is no longer the positive, primary tendency alone (for example, the positive Oedipus wish) that is operating on the side of the Id, but the Id-tendency is represented above all by its ambivalent contrary, the hatred and

delight in aggression (against the mother), that is, aggression against the object which in reality stands in the way of the original, positive Id-tendency. Almost the entire affect of the Id-tendency had turned against this secondary object, and the whole defense is directed almost exclusively against the sadistic aggressive tendencies which are aimed at the secondary, negative object representative of the repressed primordial instinct, while the Id-tendency aimed at the positive object (the father)—that is, the primal instinct representative—has become largely affectless owing to withdrawal of libido. And further, while in hysteria the instinctual conflict, in the form of a condensation, materializes itself as an innervation process in the patient's own body, and while in phobia anxiety in respect of the Id-tendency dominates the field, *in obsessional neurosis the instinctual conflict is reduced in the form of reactive compulsive thinking or in the form of a reactive action—the compulsive action—carried into the outer world*, where the instinctual danger is conjured with the help of symbolic substitute objects. We say intentionally that it is “conjured,” for the compulsive action does actually remind us, in all its details, of a religious ceremonial among primitive peoples, in which hostile supernatural powers are conjured by a ritual which is performed with painful exactitude.

This extensive similarity between compulsive action and religious ritual is not accidental, but in this remarkable analogy there is manifested a common, archaic fundamental conception—namely, *belief in the omnipotence of thought*. Much as the shaman is convinced that he is able, by his magical formulae, ritual ceremonies, etc., to conjure the demons, to avert the mischief they threaten to work, or, on the other hand, to win the favor of a powerful deity—so the obsessional neurotic is convinced that by his ceremonial compulsive actions he can conjure the hostile demons of his Id and avert the calamity with which they threaten him. Common to both is the primeval belief that merely by the fervency of his thoughts, and the symbolic actions through which these take form, the external reality, the actual world, can be magically influenced. Here, in the obsessional neurosis, is revived a fragment of a primeval, magical world philosophy, whose last traces survive, among the civilized peoples, only in the form of superstition. The obsessional neurotic has, in a certain sense, created for himself a private religion, which represents

in form a regression to the phylogenetically ancient, archaic ideology of the primitives.

The belief in the omnipotence of thought has yet other far-reaching consequences: quite generally speaking it results in an overestimation of thought as against emotional action. The result of this overestimation is an extensive intellectualization of the entire instinctual life, and above all, of sexuality. This makes itself apparent not only in the symptoms—that is, in the substitution of sexual thought contents by harmless substitute thoughts—but is of quite general application: The entire sexuality becomes affectless, unemotional; becomes, so to speak, a mere intellectual process. In this way occurs a peculiar kind of sublimation, which would be more fitly described as a *pseudo-sublimation*, since it does not create values relating to the outer world, but exhausts itself uselessly, endlessly revolving within the inner world of the psychopath. The only thing it has in common with genuine sublimation is the process of desexualization.

6. Lastly, in the worst and most inveterate final states of obsessional neurosis even the conscious relation of the compulsions to the original instinctual object may be lost and sink into the unconscious. The patient now performs his compulsive actions in a purely automatic manner, without knowing that as actions they really relate to definite persons: i.e., as preventive conjurations of sadistic impulses directed against these persons. We then merely witness a number of meaningless compulsive ceremonies which are apparently no longer founded on obsessive fears, or, if such fears do still exist, they have long ago attached themselves to some substitute object, which represents in the consciousness the lost relation to the original instinctual object. Such compulsive actions, which through the secondary repression of the original instinctual object have become apparently meaningless, have then a striking resemblance to certain religious rites whose deeper symbolic significance is often no longer understood even by the priests themselves, not to speak of the masses of the people.

It is obvious that reaction-formation—the turning point of obsessional neurotic symptom formation—can occur in this extreme form only on the basis of a congenital constitutional disposition. Any person who does not possess this disposition cannot become an obses-

sional neurotic. The disposition to obsessional neurosis evidently presupposes a constitutional enhancement of emotional ambivalence. Bleuler has demonstrated that simultaneously with every positive emotion that arises within us the corresponding counteremotion is always somehow evoked. But while the normal person, when he is governed by a strong emotion—for example, an erotic impulse—can easily thrust aside the ambivalent counteremotion of hatred, and disregard it so completely that it does not reach the threshold of his consciousness, in the obsessional neurotic both emotions are always equally near to consciousness, so that he has to come to terms with them. This primary inability to exclude counterpresentations leads to a sort of "mental cramp," which, as von Monakow truly observes, represents a process analogous to the contracture occurring in the neuro-muscular apparatus in consequence of the failure of the reciprocal inhibition. The consequence of this ambivalent experiencing of all emotions is doubt: the patient can never be quite certain about his feelings; he never knows which emotion is really the true, genuine, correct emotion, and this eternal doubt as to his own feelings will make him very largely incapable of external action; thus, he will find himself always unable to come to a decision, and then to implement this decision by direct and unambiguous action. The obsessional neurotics are therefore always the victims of doubt and irresolution, for in every case they see not only the motives which would urge them to act, but they are always equally conscious of all the reasons why they should not take such action. The result of this ambivalence is naturally very largely to paralyze the power of prompt action, since the reasons for and against the relevant action mutually cancel and annihilate one another.

Enhanced emotional ambivalence is probably a primary symptom of obsessional neurosis which in precedence of all content governs the affectivity of the patient, and facilitates or evokes the genuinely obsessional neurotic mechanisms, such as doubt, reaction-formation, the intellectualization of the basic attitude, and desexualization. But in addition to these basic symptoms there must be definite conditions of the instinctual constitution, which determine the form and content of the symptoms. One of these constitutional conditions is undoubtedly a primary and exceptionally strong sadism; only on this basis can we explain the fact that aggressive tendencies

against originally beloved persons can attain such power that so complicated and refined a protective apparatus as the obsessional neurotic reaction-formation has to be mobilized against them. In this respect obsessional neurosis represents a regression to the early infantile pregenital stage, which we have designated the anal sadistic stage. You will, therefore, not be surprised when I proceed to inform you that in all the obsessional neurotics whom it has hitherto been possible to analyze an abnormally strong analerotic fixation was established in every case. Even in our patient this fixation was most clearly demonstrable; but there is no time to present the necessary material. Yet the "anal character" of the obsessional neurotic reveals itself in the highly pedantic and painfully exact manner in which he performs, day after day, his compulsive actions, which are often quite exhausting, and take up a great deal of time; and further, in the incredibly obstinate and egoistic way in which they are performed. In these respects the obsessional neurotic is as persistent as a little child who has been refused something that he wants.

Twentieth Lecture

Mixed Neuroses—Character Neuroses—War Neuroses— Accident Neuroses

Ladies and Gentlemen:

In the last few lectures we have studied the impressive clinical pictures of the three "great" psychoneuroses, and have endeavored to elucidate the structural laws of their symptom formation. In so doing we proceeded from the hypothesis that the syndromes in question appear, from time to time, in a pure, unmixed form; so that we have before us either a plain case of hysteria, or a pure phobia, or obsessional neurosis. As a matter of fact, this is not always so; life, with its incalculable vicissitudes, often enough sees to it that a patient whose neurosis has hitherto impressed us as being a phobia or a typical obsessional neurosis may suddenly react against a particular pathogenic situation by producing a hysterical conversion symptom; or vice versa. In this way mixed neuroses arise, whose symptomatology cannot be definitely referred to any one of the three main groups of neuroses. Indeed, it may happen that in the first stages of its development a neurosis presents a clear picture of an obsessional neurosis, while in its final stages it gradually acquires hysterical symptoms of an increasingly massive character, which seize control of the clinical field.

Thus, I once had to treat an unmarried woman of forty-four, who for seven years had been suffering from the most severe hysterical symptoms affecting the urogenital system, which had been mistakenly diagnosed as organic. Since after a serious operation the troubles were not alleviated, but considerably aggravated, she at last consulted a neurologist. The patient felt as though the space between the bones of the pelvis was gradually and persistently shrinking and filling up, so that all the internal organs—the bladder, lower intestine, and vagina—were squeezed together. In the course of the analysis, which took more than a year to complete, and was entirely successful, it emerged that the patient, before the appearance of this hysterical symptom, had suffered for years from a typical obsessional neurosis. Obsessional symptoms were still present in abundance, but for the time being they were completely eclipsed in importance by the hysterical manifestations.

As a child the patient had suffered from an excessive scrupulousness, which was further intensified by a strict Catholic education in a convent school, and had developed into a pronounced obsessional neurosis. Despite the most violent conflicts of conscience she had for some years had relations with a married man. When her sister married, in the tropics, she felt that it was her duty to follow her, especially as her mother had decided to accompany her daughter. For the patient, this was the only way to break off the relation which had begun to weigh intolerably on her conscience. When after a brief sojourn in the tropics she acquired a harmless catarrh of the bladder, this originally organic trouble became the starting point of her severe hysteria. The feeling that a tumor was forming in her pelvis—the “swelling” that was compressing all the organs in the pelvis—proved on analysis to be a condensation, in which, on the one hand, an unconscious fantasy of pregnancy (to have a child by her lover) and on the other hand, the desire, arising from the primal repression, to appropriate the lover’s penis and to play the masculine role herself, had materialized themselves. Finally, of course, her need to punish herself made itself felt. In her urethral symptoms she was imitating the mechanism of the male ejaculation.

But not only can the different forms of psychoneurosis be combined in this way; for mixtures of actual neurotic and psychoneurotic symptoms are of very frequent occurrence; indeed, it looks as though every psychoneurosis, originally, had really proceeded from an actual neurosis. We saw something of these mixed neuroses when we were discussing neurasthenia and anxiety neurosis. You were then told that these actual neuroses, when they are of long duration, inevitably acquire a superimposed stratum of psychoneurotic symptoms, inasmuch as the actual-neurotic symptoms are subjected to secondary psychic modifications, and are incorporated in pre-existing complexes. But the contrary process may also take place, for it will readily be understood that in an aggravated psychoneurotically conditioned sexual inhibition, resulting from primary internal denial, secondary instinctual accumulations are bound to occur, which then perforce lead to actual-neurotic symptoms. So, as Reich has truly observed, every psychoneurosis has an actual-neurotic nucleus.

Hitherto, when we were discussing neuroses, we always had in mind clinical pictures with more or less conspicuous, and in any case thoroughly characteristic physical or psychic symptoms, which in this respect are on a par with the alarming signs of organic disease. But there are modes of behavior which do not occur at all—or make only a brief appearance—in conjunction with pronounced hysterical, phobic, or obsessional neurotic symptoms, yet which we are obliged to describe as “neurotic” because of the way in which

they operate in the patient's life. We are then confronted with what one may call a symptomless neurosis. Or, to put it more exactly: The symptoms of these neurotics consist in an abnormal attitude to life—an attitude that has the consequence that these people cannot deal in a normal fashion with the difficulties of life, but are constantly coming to grief where others are successful. The patients themselves are sometimes given to ascribing their misfortunes to "fate." They are the victims of chronic "bad luck," for whom nothing goes right, and who have therefore arrived at the conviction that they were born under an unlucky star. If one has occasion to observe such people more closely, possibly during an analysis, one very soon perceives that they are in the mysterious power of a compulsion to repeat themselves, which forces them unconsciously to respond to similar situations always with the same faulty reactions. And while they themselves always ascribe their occasional failures to the specially unfavorable circumstances, or—as they do still oftener—lay the blame of their failure on others, they do not see that it is only their own inadequate, because unadaptable and in some way devious character, that they have to thank for their chronic ill fortune. In short, we have here the so-called character neuroses. The conception of the "neurotic character" was first suggested in this sense by F. Alexander. Persons of neurotic character (this author writes) are "such as are suffering from no pronounced clinical phenomena, but in their lives behave in a conspicuously impulsive and often even a compulsive manner, and are particularly subject to influence of their unconscious tendencies. . . . Apparently this irrational behavior is an equivalent of the neurotic symptoms. . . . While the unconscious of the neurotic makes use of special mechanisms, such as hysterical conversion, compulsive and symbolic actions, and delusional ideas, of which it is characteristic that they have to be kept as remote as possible from the rest of the patient's life, the neurotic characters mingle their neuroses and their lives: they live their neuroses. . . . In the neurotic characters the pathological process has not yet progressed as far as symptom formation. . . . In any case, the irrational and neurotic procedure of these abnormal characters is more akin to a real gratification than to a neurotic symptom, and through its blind impulsiveness often does more harm than a neurosis." Alexander then continues by observing that certain impulsive criminal

types manifestly suffer from a deficiency of defensive reactions against the Id, and that other impulsive persons do not on this account develop neurotic symptoms because they constantly injure themselves by their impulsive actions, and thereby continually punish themselves for tendencies alien to the ego, so that they are able to maintain a clear conscience. Since these "character neurotics" naturally have no understanding of their own malady they constantly repeat the actions by which they injure themselves, and then ascribe the inevitable consequences to a merciless fate, or to accident. In a later work Alexander defined the neurotic character by saying that in his way of life he tended toward criminality and self-destruction alternately: "He lives out his aggression, his asocial tendencies, not in symptoms but in deeds, yet, in contrast to the criminal, he does not await the vengeance of society, but is himself his own judge."

After Alexander, Wilhelm Reich has dealt with the character neuroses from the psychoanalytic point of view. He described a series of neurotic character types, and attempted to derive them genetically from the developmental history of their libidinal vicissitudes.

a) He begins by differentiating the "impulsive character" from the other abnormal character types. The actions of these impulsive psychopaths are governed above all by undisguised and uninhibited sexual impulses. Undisguised perversions even are here almost the rule. From obsessional neurosis the impulsive character is distinguished by the affirmative attitude of the ego toward the instinctive impulses, and also by more extensive rationalizations; from schizophrania by its vital relations with the outer world, by the absence of the schizophrenic "split," and by the retention of the test of reality. Reich imagines the origin of the impulsive character thus: an extensive gratification in childhood is followed by a sudden traumatic refusal. This is followed again by an isolation, and later on by a repression of the superego, inasmuch as the demands of the isolated superego affected the ego in the same manner as repressed instinctual claims. They create the need of punishment, which leads to masochism and to "crime owing to feelings of guilt." The burden of this is constantly lightened by continual self-injury, so that symptom formation cannot occur.

b) The converse of the impulsive character, according to Reich, is the compulsive character. He manifests anal features and reaction-formations in his behavior, a tendency to compassion and guilt reactions (repressed sadism), in which expresses itself in a purely bodily fashion by persistent muscular tension. By the blocking of affect the genital instinctual impulses are kept at bay, but in the compulsive character they remain on the level of phallic-sadistic reaction. The libido regresses to the anal stage; that is, the binding of aggression is effected with the help of analerotic energies. The persisting tension of all the

muscles of the body, but above all those of the pelvis, corresponds with the tendencies toward self-restraint. In a metaphorical sense, the compulsive character restrains even the mental urge to evacuate—in short, self-control permeates his whole being.

c) The "hysterical characters" are distinguished by "sexual demeanor," by disguised or undisguised coquetry, but also by anxiety and drawing back as soon as the desired sexual goal is at hand. The sexual life of these hysterical characters is therefore characterized by performance without the corresponding sexual experience. Dread of sexual experience (of the orgasm) is overcome by empty activity. In men, tenderness, feminine demeanor, and excessive politeness are generally manifested; in both sexes, inconstancy (in reactions) and extreme suggestibility (tendency to passive hypnosis). At the base of hysterical characters of this type is a fixation on the genital stage, and, indeed, on incestuous objects. In contrast to the obsessional or compulsive characters, the hysterical characters are overburdened with unmodified sexual tension. They show little tendency to sublimation, because their sexual energies neither press for sexual gratification, nor are they productively engaged otherwise, but are transformed, partly into physical conversions, and partly into anxiety. Fully developed genital tendencies can no longer be sublimated: they always press for direct discharge.

d) Further, Reich described a "phallic-narcissistic character." To this category, according to him, belong the self-confident, arrogant, athletic people among whom many types of sportsmen may be found. An aggressive temper, with defective reaction-formations against aggressive behavior, and strong object relationships are the rule among these people. Also, according to Reich, almost all forms of active male and female homosexuality. From the standpoint of their libidinal history, these are persons whose genital object libido has been inhibited at the climax of genital aggression by a forcible refusal. Consequently the woman is abandoned as an erotic object, the phallus assumes a central position, and the total ego is in a sense identified with it. Hence contempt for women, since they possess no penis, and relations with women only on a purely phallic-narcissistic basis, without tender impulses (inability to love), and with the possibility of unconscious sadistic impulses of revenge, which originally refer to the forbidden and refusing mother. At the same time, in their social aspects these phallic-narcissistic characters may exhibit conspicuous capacity.

e) Lastly, Reich includes among the neurotic characters, as a special form, the masochistic character, distinguished by a total inhibition of aggression—including genital aggression—by an overwhelming castration anxiety. In order to avoid the dreaded castration the masochist, as it were, accepts a beating as the milder punishment. As a matter of genetic history, a profound disappointment in love has been accompanied by an enormously enhanced demand for love, which has left behind it a constant dread of being left alone.

To these pathological character types Reich would oppose the "genital characters" as "normal characters," in which the genital stage of libido-organization has been completely attained, while the Oedipus complex is definitely overcome, and the genital urges have been wholly transferred to a heterosexual object, so that full orgasmic potency obtains, and consequently none of those undischarged libidinous tensions are left which might translate themselves into neurotic symptoms, or, as in the neurotic characters, in neurotic actions.

Reich, however, does not stop short at the representation of individual character types which are explicable on historic-genetic grounds, but endeavors also, in his main work (*Charakteranalyse*) to analyze, from the historical and dynamic-economic standpoint, "Character as a total formation." In this he goes beyond the preliminary analytic studies of Freud, Jones, Abraham, and others, who made the first attempts to relate certain traits of character to their infantile origins—that is, to discover their instinctual basis. I will refer only to Freud's presentation of the "anal character" with its symptomatic triad of pedantry, love of order, and parsimony. Character, according to Reich, serves the resistance against injurious or supposedly dangerous Id-tendencies. It is the typical reaction against these tendencies, the armor or shield of the ego against the dangers of the outer world as well as the dangers of the repressed instinctual demands of the Id: "Character is a chronic induration of the ego." This occurs, according to Reich, on the basis of the three following processes:

1. The ego identifies itself with the chief protagonist of denial. Hereby the characterological armor is given significant contents.

2. The ego turns the aggression which it mobilized against the denying person, and which generated anxiety, against itself. Hereby the most essential portion of aggressive energy is bound, part of the motor energy is blocked, and the inhibitory element of the character is created.

3. The ego forms reactive attitudes against the sexual strivings, utilizing their energy in the service of the defense against them.

The characterological armor is thus on the one hand the result of, and a positive way of disposing of, the infantile sexual conflict; on the other hand, it may become the basis of later conflicts and symptom neuroses: that is, it becomes a basis of character neurotic reactions. This happens when the characterological defense goes too far, leaving the ego so torpid that it cannot later on achieve an orderly sexual life and sexual experience.

The result of character formation, according to Reich, is dependent on various conditions, namely:

- a) on the time when the instinct encountered denial. In the early stages of instinctual development repression is so effective that the instinct is now capable neither of sublimation nor of conscious in-

instinctual gratification. The premature repression of anal erotism is prejudicial, for example, to the development of the anal sublimation and prepares the way for serious anal reaction-formations. Generally speaking, the total activity is damaged if the instincts are excluded from the composition of the personality. If denial is inflicted on the instincts at the climax of their development, complete repression is no longer possible. An insoluble conflict arises between prohibition and urge, and the foundation is laid for the development of an impulsive character. It is characteristic of the impulsive characters that it is not the reaction-formation against the instinct, but the instinct itself (predominantly sadistic impulses) which is pressed into the service of the defense against imaginary situations of danger.

b) In contrast to the impulsive character, repeated and intensive denials give rise to the maximally inhibited character.

c) Further, the result of character formation is dependent on which impulses have experienced the central denial; and also

d) on the relation between allowing and forbidding;

e) on the sex of the (principal) forbidding person; and lastly

f) on the contradictions in the prohibitions.

Reich does not deny that modes of reaction in the sense of character are to a certain extent hereditary, or constitutionally predisposed, but considers that the influence of the environment is also decisive in character formation. A specific key-note of the personality is always established and can hardly be influenced. However, the overestimation of heredity is based on an unconscious shrinking from the consequences and the criticism of one's own achievements as educator. To sum up: according to Reich it may be said that the neurotic character, not only in its content, but also in its form, is built up, just like a symptom, after the fashion of a compromise. It contains the infantile instinctual demand, and also the defense against it. The infantile nuclear conflict persists, but has transformed itself into formal attitudes.

We have purposely devoted considerable space to Reich's views, because they are especially representative of the psychoanalytic doctrine of character. Reich, in fact, must be credited with the first comprehensive attempt to transfer the investigation of character from the sphere of so-called moral sciences (in Klages' sense of the term) to the sphere of biological-genetic methods (the methods of natural

history). Although his formulations may seem in many respects to be overmeticulous and biased in their orientation, I think it must be granted that his fundamental views as to the nature and the formation of character are largely correct. As a matter of fact, it cannot be disputed that all character formation arises from the necessity of a reliable stimulus barrier, a protective barrier against the manifold dangers to which uninhibited instinctual demands would expose the existence of the individual in his environment—that is, in the social fabric. Also, character formation goes to a great extent hand in hand with the formation of the superego: *Character is a function of the superego*. Accordingly, the pathological character formations which we encountered in the character neuroses were the result of a more or less pathological superego formation; and such would be the repression of the superego which Reich postulates in the formation of the impulsive character. At the same time, the so-called “character reactions” against various external events and inner temptations naturally follow quite automatically, for they depend, as was explained in the fourteenth lecture, on fixed attitudes which were acquired in the course of development, and which occur, in accordance with the mechanism of conditioned inhibitory reflexes, whenever a situation recurs which bears a resemblance to that in which the reaction was first produced. The “attitude” which one “takes up or preserves” in respect of the various new events is literally impressed upon the external attitude of the individual, in characteristic muscular tensions which may in the last resort be regarded as fixed pantomimic expressions.

However true all this may be, I think certain reservations and limitations are indicated in respect of the psychoanalytic characterology which have just been outlined. To begin with, it seems to me that Reich, and the other psychoanalytic authors who have dealt with this subject, have to some extent underestimated the hereditary or constitutional factors in the formation of character. Of course, we must by no means overlook the almost insuperable difficulties in the way of forming a clear conception of the constitutional factors in character formation—that is, of accurately separating these factors from the factors embiontically acquired from environment and education (and neurotic teachers!)—factors which are traumatically conditioned. For example, when Reich says that the analytic influencing

of character occurs only in a quantitative, not in a qualitative respect, he must thereby be hinting at this instinctual-constitutionally conditioned barrier; for it is after all fairly probable that even the qualitative mixture of individual characteristics is conditioned primarily by the inherited instinctual constitution, which determines beforehand what quanta of libido are allotted to the individual component instincts and therefore to the relevant stages of the infantile organization. On this, ultimately, depends to a great extent the varying traumatic efficacy of prohibitions, commands and punishments, the varying success or failure of repression or sublimation, and fixation, and the regressive recathecting of earlier stages of organization dependent on the latter.

Further, it is highly probable that a considerable proportion of the neurotic characters described by Alexander, Reich and others, belongs to the group of congenital psychopathies, in which the instinctual constitution exerts the decisive influence in the subsequent character formation. This must be particularly true of the "impulsive character" described by Reich, and true in proportion as this type approaches the sphere of criminality. Here, above all, a primary ego-debility or an innate structural weakness of the secondary social "drives," combined with an abnormal strength of the archaic primordial instincts (as described in the twelfth lecture) plays a decisive part. In such an unfavorable constitutional instinctual mixture there is no need of peculiar traumatic experience or peculiarly brutal refusals at a definite moment of libidinal development in order to create a pathological character; for with such a mixture the development of libido must almost inevitably be forced in the relevant directions—more or less independently of all external and internal vicissitudes.

In this connection also there are certain objections to be made against Reich's unhesitating equation of the "normal character" with the "genital character." It is our own impression that in certain forms of psychopathy full orgasmic potency may very well coexist with fairly serious anomalies in other respects: for example, in the direction of criminality. A cautious formulation would rather run as follows: Every normal character must also be a genital character and in full possession of normal orgasmic potency, but not every genital character need therefore be a normal character.

Lastly, it is very questionable whether the character is really determined exclusively by the vicissitudes of libidinal development. For quite apart from the above mentioned factor of the primary constitutional strength or weakness of the ego, and the disposition of the secondary instincts, the co-operation of factors of a very different nature is essential: for example, the degree of the constitutionally attainable intellectual differentiation (for instinctual impulses may after all be materially held in check by a keen intelligence, and their effects may be offset by a secondary compensation); and further, factors of the constitutional affective disposition, which for its part is largely dependent on the constitution of the endocrine system. Persons with congenital lability of the endocrine-vegetative system, with congenital lability or weakness of the hemo-encephalic barrier, will behave quite differently toward the outer world, and also, of course, toward the dangers threatening them from their own instinctual life, from persons of equable temperament. The temperament also undoubtedly influences the vicissitudes of the libido, and therefore the development of the character. But here, under certain circumstances, even purely physiological factors of a constitutional nature may play their part; think, for example, of a purely physiologically conditioned, primary, increased capacity or incapacity of forming conditioned inhibitory reflexes, a peculiarly strong congenital ambivalence of all emotional impulses, and the part they play as congenital predispositions in obsessional neurosis and the compulsive character. But we can think of factors even outside the cerebral system which help to determine character: for example, certain congenital organic inferiorities in Adler's sense, which can assuredly do much to determine the character and the destiny of the individual. However—and here we can agree unreservedly with Reich—all these last-named factors lead to the definitive formation of those attitudes which we describe, in the mature human being, as his character, only in conjunction with the libidinal economy.

In conclusion, the war neuroses and accident neuroses must be briefly discussed. We have purposely reserved them for the end of this section, since an understanding of these forms of neurosis presupposes an exact knowledge of the psychopathology of the so-called "genuine" neuroses: that is, of those psychoneuroses which appear

"spontaneously," and are not preceded by any special kind of physical trauma. This amounts to saying that the so-called "accident neuroses" do not represent a special variety of the known forms of neurosis; in other words, that there is no such special malady as "traumatic neurosis." Moreover, we find, even in the neuroses that appear after accidents, all the forms and clinical pictures which have long been familiar to us, from the observation of everyday life, in the so-called "genuine" neuroses, and in both categories the physician and the research worker have been confronted with the same fundamental problems. For a long while attempts were made to deny these facts, and to ascribe to the war neuroses and accident neuroses a special etiology and pathogenesis, peculiar to them alone. For example, as was mentioned, briefly, in the seventh lecture, H. Oppenheim, in particular, postulated for the so-called traumatic neurosis an organic basis in the form of minute "molecular changes" in the substance of the brain. This theory was afterwards accepted and further established by von Sarbo, Rosenstein and others. But the mass experiment of the World War soon discredited Oppenheim's theory. Strenuously though the army surgeons declined, at first, to recognize the innumerable and peculiar clinical pictures in the case of unwounded or only slightly wounded soldiers for what they really were, and to refer them to motives so "disgraceful," or at least, so unheroic as dread of the unprecedented terrors of the front, the conviction finally forced itself on all unprejudiced observers that the nervous disorders following upon so-called "shellshock" were nothing more than the long familiar symptoms of classic hysteria. The observations and experiences which during the first World War and in the years following the war led to a revision of the opinions relating to accident neurosis were essentially the same in all countries. They may be briefly summarized as follows:

1. That the overwhelming majority of the so-called "shell-con-tusion neurotics" were not wounded at all; that is, they had suffered no real physical trauma, and hence, despite the most careful examination, the neurological report on their condition was completely negative;

2. on the contrary, it was precisely in the severely wounded men that the characteristic clinical pictures of functional impotence, paraplegia, tremor, etc. did not appear;

3. that the pronounced symptoms of so-called shellshock could be dispelled with relative celerity by psychotherapeutic methods;
4. that, on the other hand, the symptoms often reappeared in a flash as soon as there was a suggestion of returning to active service;
5. that when the situation had altered, especially after the armistice, spontaneous mass recoveries occurred; and lastly
6. the characteristic forms of war neurosis, in particular the palsies and "paralyses," were practically unknown among prisoners of war, even when the prisoners in question had lain for days under drumfire or had taken part in an assault. For example, among 60,000 French prisoners of war Moerchen found only 8 cases of traumatic neurosis, which quickly recovered.¹

In short: all these facts can be interpreted only in one way: they indicate that the immediate precipitating motives of war neurosis derive above all from the *timor belli*; that we are dealing with the self-protective tendencies of the ego, of the instinct of self-preservation. The experiences derived from industrial accidents before and after the war—and especially from the enormous mass of material relating to social insurance—and from accidents covered by industrial insurance, and especially cases of injury to the skull and brain, agree completely in all these points—*mutatis mutandis*—with the results of the mass experiment of the World War. Pönititz quite frankly

¹ On the other hand, it was never asserted that no neuroses whatsoever occurred among prisoners of war, as Riese tried to suggest. It was merely asserted—and proved—that the special forms of acute war hysteria were practically never observed among prisoners of war. On the other hand, it is obvious—and was pointed out by Repond and others—that among the millions of prisoners of war, just as in the civil population, a certain percentage of neurotics, including hysterics, was naturally bound to exist. And further; in very many prisoners of war the psychic miseries of internment provoke, in the course of time, a kind of mass neurosis, which was admirably described in a monograph by A. L. Vischer, and designated *barbed wire disease*. The long continued loss of liberty, and above all the compulsion to live one's life in the heart of a community from which it was impossible to escape even for a moment—in other words, the abolition of all privacy, together with the compulsory sexual abstinence, gradually exerted a deleterious influence on the mental condition and instinctual life of the men behind the barbed wire; they became quarrelsome, petty, and ill-tempered, and often gave way to sexual perversities; they suffered from insomnia, and as time went on became more and more autistic and absorbed in themselves, while outwardly they manifested an increasing irritability, sometimes amounting to fury, alternating with depression and apathy to the point of a vegetating indifference. The main problem of these men who have thus vegetated for years behind the barbed wire is the disquieting problem as to how they will ever again find their place in normal civil society.

defined war hysteria as a "purposeful reaction." After this the theory of the wish-conditioned accident neurosis moved into the foreground, and in Germany, in particular, Bonhoeffer, Reichardt, His, Jossmann, Naegeli, Stier, and Lottig led the fight for the recognition of this pathogenesis even in jurisprudence. It was supposed that the mere fact of being insured, in "psychopathically predisposed, asocial, antisocial, ethically inferior, covetous and untruthful individuals" (and what other epithets of moral indignation) awakens the desire to derive the greatest possible profit from insurance as soon as they have received an accidental injury—however slight—and that with this end in view they simulate a malady. "Pensioner's disease"—that is, the desire to obtain the highest possible compensation—if possible a pension for life—is supposed to be the main cause, if not the only cause, of the so-called accident neuroses. So Lottig speaks of "purposeful hysteria," Meier-Müller of "purposeful neurosis" and "compensation mentality," and Nippe of "*telophrenia*," which means, more or less, "purpose mentality." Other writers point especially to the social-psychological determination of accident neurosis; to its close connection on the one hand with the insecure economic situation of the worker, and on the other, with the legislation relating to accidents, laying special stress on the suggestive effect of the claim for compensation on wide circles of the working population. Further, they emphasize the influence exerted on patients by the environment, and also by physicians [misuse of the terms "concussion of the brain," "iatrogenous neurosis," (Bumke)]. In short, we have here genuine mass neuroses, which are actually cultivated in the people by all the factors enumerated (H. W. Maier, Zankowski, Meier-Müller, et al.). These "compensation neuroses" which are so prevalent among the people (Christian) can be permanently avoided only by a modification of the law as a measure of social prophylaxis (Hoche, Meier-Müller et al.). Many representatives of this line of thought, and above all Bonhoeffer, Reichardt, Stier, Jossmann, Hoche, Hauptmann, Seelert, Kroiss, and Lottig, draw the ultimate scientific consequences from their opinions, inasmuch as they even deny the pathological character of the so-called "compensation neurosis": This, they say, is merely a "psychic evasive reaction," a "psychic reaction to the plea for indemnification, a "reactive psychic disorder," etc. "An enormous number of persons who have met with

accidents with nervous sequelae would be hale and capable of work if they had not been insured," wrote Hoche in 1928. So there is no question of illness, and therefore there can be no question of an obligation to indemnify the compensation neurotics, although they may often be in need of relief. (But may they not, then after all, be ill?) Reichardt has even asserted that children, women(!), students, officers and athletes do not suffer from accident neuroses—an assertion which is certainly incorrect, especially in respect of women. Meier-Müller, however, has pointed to the paradoxical reaction of flying officers after accidents; they, on the contrary, develop an accident neurosis if on account of serious cerebral symptoms they are prevented from flying again.² On the other hand, Reichardt justly observes that very often, in precisely the worst cases of "accident neurosis," no accident has taken place. All that is necessary for the occurrence of the reaction is the subjective conviction of the insured person that he has suffered an indemnifiable accident. The direct psychic consequences of an accident can only be those which can be produced without the suit for compensation and wishful tendencies of whatever kind; that is, the psychic disturbances of acute "fright neurosis," whose duration is fixed by these authors—quite arbitrarily—at a week, or at most three months. Whatever nervous disorders may still exist after this lapse of time have no longer any relation to the trauma.

An essential etiological factor, in addition to the actually operative desire for compensation, in the accident neuroses of war and peace alike, is a pre-existent psychopathic constitution. This amounts to saying that in respect of accident neuroses the same hereditary and constitutional defects are operative as in the so-called genuine neuroses. We need not enlarge on this point here; it is enough to refer to what was said in previous lectures, especially in the eighth. This will tell us how necessary it is, especially in respect of the

² In respect of this "paradoxical reaction to accident" we must, after all, take account of the fact that airmen receive quite considerable amounts of extra pay for every flight, so that when incapacitated with only the sparse payments of military insurance, they are very definitely worse off than if they continued on duty. Thus, unlike the ordinary worker, they have a considerable (even a financial) interest in returning to duty as quickly as possible, so that it not infrequently happens that they even conceal appreciable disabilities in order to be certified as fit for duty as soon as possible.

accident neuroses, to make the most careful investigation of the patient's prehistory, if one wishes to avoid any possibility of error in certifying a causal connection. On the other hand, we must point to the special difficulties encountered in establishing pre-existing dispositional factors as soon as there is the remotest danger that their discovery may be to the economic disadvantage of the patient. The probability that in a large proportion of pure neuroses after skull injuries (and the great majority of accident neurosis occur as late sequelae of skull injuries) a pre-existing disposition may play the principal role is evident from the mere fact of the enormous frequency of genuine neuroses. Indeed, this consideration alone tells us that among the many thousands who are victims of accidents every year there must be a corresponding proportion of persons who were already suffering from latent or manifest neuroses, so that we should anticipate a considerable percentage of psychoneurotic reactions among them. The ironical remark of the eminent Italian psychiatrist Murri was perfectly justified: "It seems to be assumed that only healthy persons can meet with an accident." We may well keep this in mind in view of a recent tendency of certain experts, who can hardly ever bring themselves to diagnose a neurosis in the case of a patient who has at any time suffered the slightest injury to the skull. These experts are forever warning us of the difficulties of differential diagnosis between organic and functional disorders after traumata of the skull, and in order to make this warning more impressive, case histories and reports are published relating to patients who for years were mistakenly regarded as "neurotics," and then finally proved to be suffering from severe organic disorders (Riese, Minkowski, de Morsier et al.). As against these warnings it may be objected, firstly, that the existence of diagnostic errors and incorrect certificates does not in any way prove that pure psychoneuroses do not occur after accidents, and secondly, that such errors are at least as frequently committed in the contrary sense—in the sense that pure (and often pre-existent) psychoneuroses or psychopathies are regarded for years as "sequelae or organic injuries to the brain," and large pensions are paid to the sufferers in compensation.

As regards the pathogenesis of accident neurosis, its attribution to the one motive of a conscious desire to be indemnified has always evoked contradiction from the more thoughtful investigators as

altogether too simple an explanation. Von Monakow, for example, emphasized the fact that even the so-called compensation neuroses follow, in principle, the same biological laws as the genuine neuroses, and that "cupidity" is by no means a specific feature of compensation neurosis, but an integrating factor of every neurosis. That the so-called "compensation mania"—that is, the primitive desire for monetary compensation—cannot be the only, nor even the essential motive of accident neurosis, is shown by the mere fact, which today is no longer disputed, that uninsured persons, far oftener than is generally assumed, may develop typical and severe accident neuroses (Aschaffenburg, E. Loewy, Levy-Suhl, Moerchen, Honigmann, E. Boschi, Riese, Stursberg et al.). Victims of accident neurosis may even commit suicide, though but rarely (Jankau, Max Meyer, R. Brun), despite the contrary assertion of Naegeli. Such occurrences are decidedly arguments against referring the disorder exclusively to mere "compensation mania." The notion that nervous symptoms can be provoked by a conscious effort of will on account of conscious wishes is altogether nonsensical—indeed, such a process, whatever may be said to the contrary, would be equivalent to simulation. But the genuine simulation of complete clinical pictures is, according to my experience, excessively rare; among my cases I have found only 0.5 per cent of pure simulants. On the other hand, it cannot be disputed that conscious or unconscious exaggeration, and aggravation, in accident neurotics, and especially in compensation and insurance neurotics, are of frequent occurrence. The contrary indeed would be remarkable: if in a world where hypocrisy and humbug everywhere play such an important part, the victims of accidents alone should be exceptions to the general moral imperfection of humanity. Moreover, it must not be forgotten that very often the accident neurotic, thanks to the general suspicion with which he is regarded by the insurance companies, and by many physicians, is driven into a secondary battle for the recognition of his troubles, and thereby into exaggeration, and even a conscious partial simulation. Yet he abandons these exaggerations as soon as he feels that the doctor understands him. In this he behaves like any genuine hysteric.

That even the so-called "compensation or insurance neurotics" are therefore, in spite of this, really unwell, that accident and compensation neurosis is a thoroughly pathological condition, a real

malady, is once more recognized today by the overwhelming majority of neurologists and psychiatrists, despite the oversubtle definitions attempted by such writers as Bonhoeffer, Stier, Reichardt, Lottig, et al. Even if we were willing to regard the cravings for compensation as the sole cause of the neurotic manifestations, yet the motive, the desire for security in life, which underlies this craving, cannot be regarded as a mere efflux of naked greed for money and profit; especially if we consider what hardships these neurotics often have to suffer, in order that they may at last, perhaps only after years, obtain the actually trivial "advantage" of a small indemnity or pension—a fact to which Landauer and Levy-Suhl have already drawn attention. The inducement offered by such compensation as is provided by systems of social insurance is so small, and the disproportion between this and what the man could earn in health so obvious, that the wish to be ill must have deeper foundations. These deeper foundations, which underlie the accident, insurance and compensation neuroses, are ultimately—that is, in principle—none other than those that underlie the genuine neuroses. The accident neuroses are distinguished from the latter merely by the fact that in them, owing to the presumed danger sensed by the instinct of self-preservation, the narcissistic regression plays a considerable part: so they are in the true sense of the word narcissistic neuroses. At a wartime congress of psychiatrists which was held in Budapest in September 1918, Freud, Ferenczi, Abraham, Simmel, and in a supplementary contribution Jones, attacked for the first time the problem of accident neurosis, and even then a surprising insight was manifested into the backgrounds of the so-called war neuroses. Thus, Simmel adduced a number of examples of his psychotherapeutic treatment of war hysterics, in which he succeeded in unmasking and dispelling the stereotypical symptoms of these patients (contractures and spasms) as fixed affective reactions; that is, precisely those symptoms which today are once more regarded as organic, extrapyramidal disorders of movement (see Lecture 7!). Moreover, Ferenczi, Abraham and Jones were able to confirm Freud's opinion that at any rate in the hypochondriac-psychasthenic forms of accident and compensation neurosis there had always been a withdrawal of libido from its objects and a reversion of libido to the ego—that is, a narcissistic regression. Abraham reported a case of traumatic neurosis

in a young girl whose analysis had shown beyond a doubt that the symptoms, one and all, were related to a pre-existing neurotic conflict: "The trauma was far less important." He mentioned also that the litigants (in indemnity proceedings) whom he was able to observe suffered from impotence; that is, a sexual symptom, which shows that in these cases there must have been enormous displacements of libido: "Where formerly the faculty of self-sacrifice existed," writes Abraham, "now the narcissistic rapacity prevails. The genital zone has lost its primacy; analerotism is reinforced."

More recent authors of the psychoanalytic school have further investigated the psychodynamic situation in the so-called compensation neurosis. They all agree in this: that they attribute to the accident itself, in the genesis of the neurosis, at the utmost the quality of a final, liberating factor. Perhaps Landauer puts this most plainly when he says that the accident neurosis is only the repetition of earlier neurotic reactions, and above all, those of the so-called infantile neurosis. Elsewhere he actually says: "It is not the bodily injury that liberates the neurosis"; having first alluded to the often grotesque disproportion between the slightness of the trauma and the severity of the "traumatic neurosis." In almost every accident neurotic one finds a great many neurotic symptoms, or even obvious nosogenic factors in the prehistory; indeed, "in very many cases" it can even be established that an accident as a way out of a situation of conflict was unconsciously sought in order to liberate the neurosis. Thus, the accident, as an unconscious parapraxis, becomes itself a neurotic symptom. The plausibility of this assertion, so amazing at first sight, was confirmed by other authors—by Weizsäcker, Christoffel, Blum and Tramer—by instructive case reports. Further, Sperling's analyses, together with the case mentioned by Honigmann, of a story of Goethe's which was evidently derived from reality, point clearly to the fact that the "trauma" is in the majority of cases merely the final impetus administered to the already long latent or manifest neurosis, which supplies, as it were, the pretext that enables the neurotic to lay the blame for his insoluble inner conflict on a visible, external cause; for example, on society, the insurance system, etc., which offered itself as an obstacle to his infantile striving for pleasure. Meng lays especial emphasis on the striking similarity of the mentality of the accident neurotic to that of the child: "A de-

spairing, often a pitiful, rarely a defiant child is visible in the form of the adult," he writes; and he adds: "In compensation neurosis the unconscious cravings (of the primary nosological gain) are displaced on to the indemnity as object"—a statement which I myself have already made in a very similar form. In a word, the pathological significance of the compensation neurosis is precisely this resuscitation of the infantile "wish neurosis," and the displacement of the relevant instinctual wish impulses on to the craving for compensation. The conscious content of the compensation neurosis relates merely to the secondary nosological gain—that is, the anticipated acquisition of money, which can be realized only after the outbreak of the illness. The compensation wish therefore postulates the illness.

Lastly, I must make some allusion to Blum's profound analysis of the structure of accident neurosis and the so-called "sanitary conscience." Proceeding from von Monakow's doctrine of the "biological conscience," the *syneidesis*, Blum shows why and how in the accident neurotic a genuine conflict of conscience develops between the requirements of reality, represented by the superego, and the instinctual infantile wish impulses, which after an accident take refuge in the "flight into illness"—that is, in neurosis. In consequence of the feelings of guilt arising from this moral conflict the neurotic feels that his illness is also a punishment. The infantile hedonic gain, on the other hand, displaced on to the indemnity as object, and represented by it in the consciousness, comprises yet other early infantile impulses, above all impulses of a sadistic nature: The insured person demands retribution from society; it must atone for the harm done, for which he was not responsible; by his flight into neurosis he wishes to compel the State or the insurance company to do his will; but he is ready to accept its charity; for the damage he has suffered he, on his part—through his claim for compensation—wishes to inflict injury, and so to revenge himself on the responsible party; on the State, the employer, the insurance system, or—if a private person was concerned—on the person who was responsible for the accident. This last motive was recognized many years ago by Naegeli (whom we have to thank, more than anyone, for decisive contributions to the differential diagnosis of the symptoms of accident neurosis) as an essential factor in accident neurosis; Naegeli even speaks in this connection of "revenge neuroses."

What has been said hitherto as to the pathogenesis of the "accident neuroses" refers only—it should be noted—to the so-called "compensation neurosis." It is obvious, however, that in addition to this there are other forms of accident neurotic reactions in whose genesis the unconscious motives under discussion play no part, or only a subordinate part; or operate only in a secondary fashion during the course of the malady. This refers above all to the genuine traumatic hysteria, and the not infrequent posttraumatic phobias. In both these forms the fright trauma is quite obviously—as regards the experience of the accident—the principal etiological factor. This means, either that these forms of neurosis have developed from a primary fright neurosis (cf. Lecture 6), or that they represent secondary reactions to the accident, which help to safeguard the victim against the repetition of such an unpleasant occurrence. The first possibility holds good of traumatic hysteria in the narrower sense, which is the prototype of the genuine "traumatic neurosis" of the older authors. Fundamentally it is nothing more than a protracted and fixed fright hysteria—a clinical picture whose acquaintance you made in the fourth lecture—although in the course of time symptomatology is gradually organized and enriched, as is indeed the case in every form of hysteria. In the posttraumatic phobias, on the other hand, we have a secondary defense—and avoidance—reaction, which follows the type of which you heard in the eighteenth lecture, and is precipitated by the same mechanism as that which operates in every genuine—that is, non-traumatic phobia: namely, the mechanism of the conditioned reflex. Think, for example, of the tiler, who, after falling from the roof, will no longer trust himself on roofs or scaffoldings, since on the mere attempt to work again in such exposed positions he is overcome by uncontrollable anxiety, with all its bodily symptoms—and you will understand what we mean by a traumatic phobia.

It is clear that for these forms of accident neurosis the "craving for compensation" does not operate as a motive, being excluded beforehand, without detriment to the fact that in chronic cases even these forms, with the lapse of time, may acquire a secondary overgrowth, such as we see in the so-called compensation neurosis, and for which the already described psychology of the "infantile wish neurosis" holds good.

Thus, in the accident neuroses we have, on principle, to distinguish between two etiologically different forms: namely,

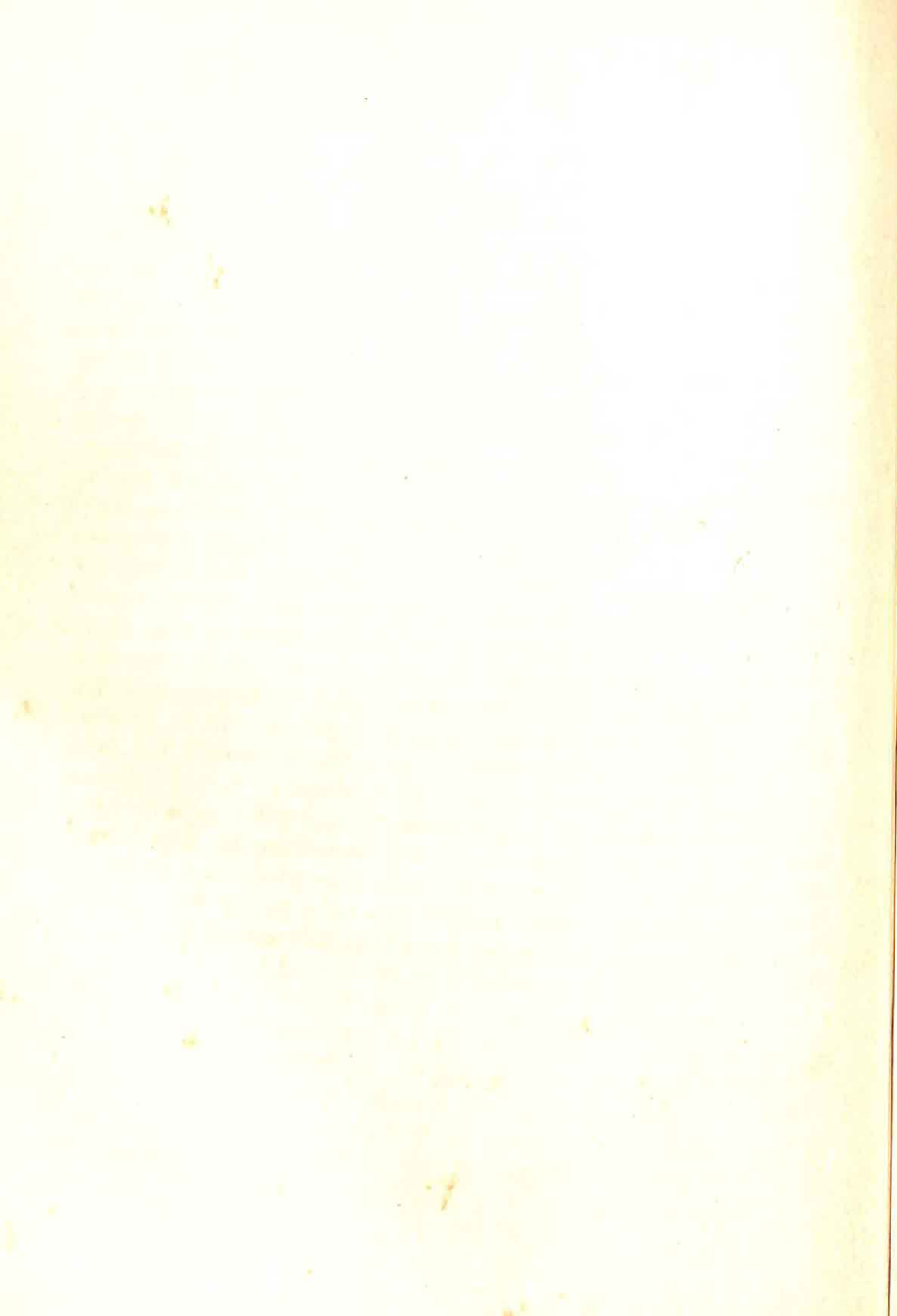
1. the genuine or primary traumatic neuroses in the narrower sense, among which we include

a) the genuine traumatic hysteria

b) the posttraumatic phobia;

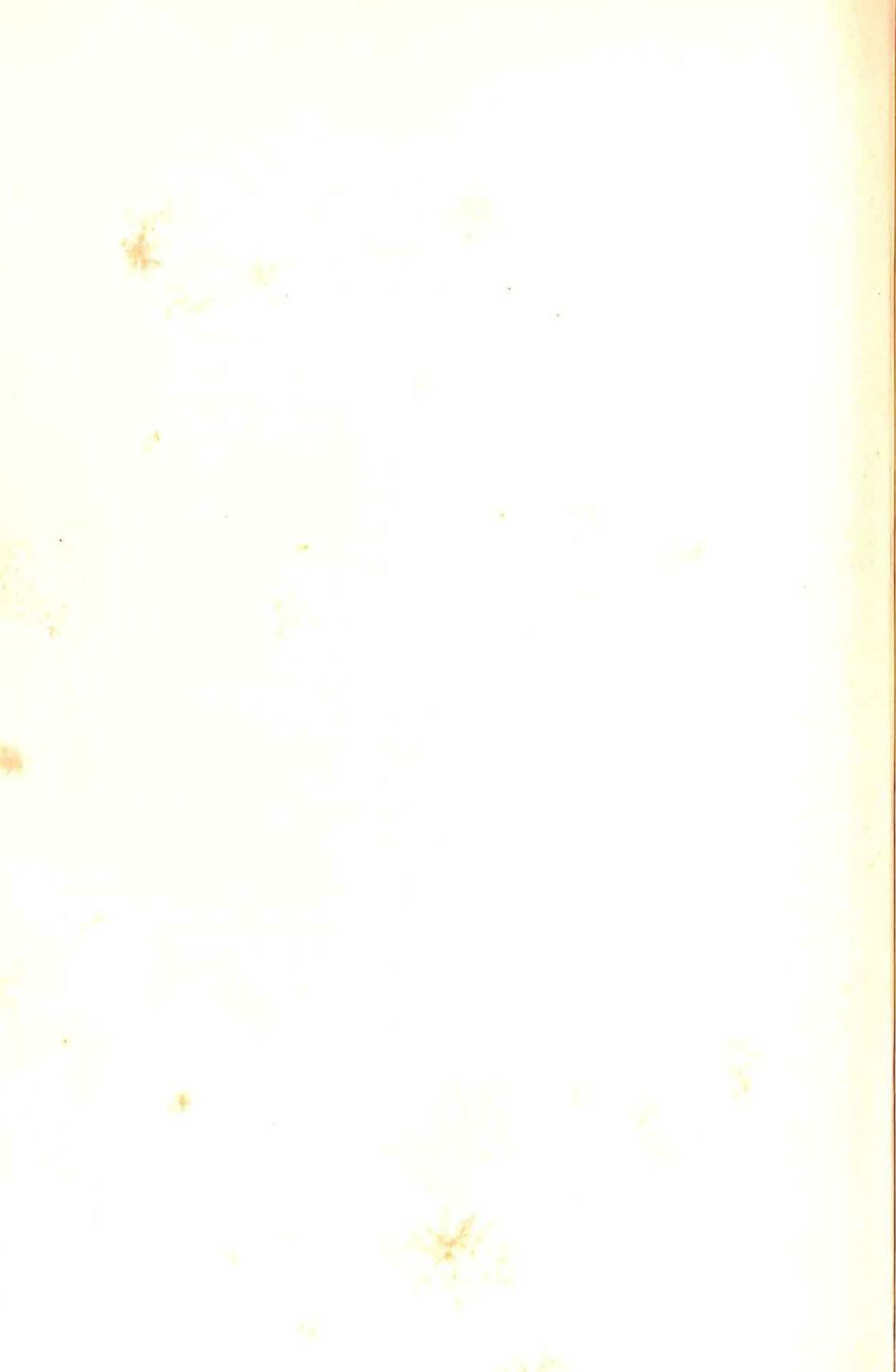
2. the secondary compensation and insurance neuroses.

This division is not only theoretical; it has also an eminently practical significance. The genuine traumatic neuroses are today (at least in Switzerland) generally recognized by the courts as direct psychic consequences of accidents, and therefore, on principle, indemnifiable, which, considering their etiology, seems only just and equitable. On the other hand, the claims in respect of the "pure" compensation and insurance neurotics are not as a rule now recognized by the courts, but are simply dismissed. From the psychoanalytic standpoint such a procedure may appear completely justified: for as we have seen, this form of accident neurosis represents, essentially, a regression to early infantile behavior, so that logically the only conclusion to be drawn is that the social environment cannot possibly be required to follow the compensation neurotic in his deviation into regression or meet him halfway; there is certainly no reason why one should support and confirm, by the grant of a pension or a capital sum, the infantile regressions of the patient, built up on the pleasure-principle. One would thereby be doing such a neurotic an ill service, since this would be, in a sense, fostering and perpetuating his malady, his neurotic infantilism. The psychoanalytic therapy has set itself the task of helping the neurotic to overcome the regression to the pleasure-principle, to face the facts, and to readjust and adapt himself to the social reality. By the grant of a pension we should deprive the patient beforehand of any possibility of achieving such readaptation (R. Brun, 1930).



PART IV

RETROSPECT AND OUTLOOK



Twenty-first Lecture

The Construction of a Neurosis—The Neurotic Person in his Environment—Initial and Final Stages

Ladies and Gentlemen:

The ostensible purpose of these lectures was to ascertain the nature of neurosis and as far as possible to arrive at a comprehensive and in every way well-founded theory of the neuroses. The unusual difficulties attending the systematic exposition of so complicated a subject compelled us to follow the method of elementary analysis: that is, there was nothing for it but to study, one by one, and as far as possible to understand, biologically, the various factors which play their part in the formation of the neuroses and their symptomatology. For the time being we could pay little attention to the reciprocal reactions of these factors, or their collective action in a transient progressive, dynamic phenomenon. We have thus achieved a certain understanding of the individual "mechanisms of the neuroses," and have, so to speak, to a great extent laid bare their skeleton, yet I am almost afraid that in so doing we have to some extent lost sight of the whole. Here the examples which I have cited from analytic practice in the last few lectures will not help us to any great extent, since they served, chiefly, to illustrate the mechanisms of symptom formation, but could only incidentally give us a notion of the temporal development, the construction of the neurosis, and the conditions in the patient's environment essential to its existence.

For a neurosis does not consist merely of a conglomeration of individual symptoms; it is an extremely complicated and variable dynamic eventuality, a process, which can to a considerable extent adapt itself to changes in the external circumstances—the temporary environment—and which always profoundly affects the whole personality of the patient, fundamentally altering his character, and in the course of time exerts a decisive influence on his destiny, on the whole course of his existence, and on his way of life.

It goes without saying that the patient's ego is by no means passive in respect of his symptoms; it reacts to them in a characteristic manner, and assumes the defensive against the compulsion they place upon him; or sometimes it will finally "make the best of a bad job," exploiting the neurosis as far as possible to serve its own ends.

These matters we have now to consider: the progressive construction of the neurosis, its relations to the patient's environment, and the secondary reactions of the ego to the malady.

As regards the development and progress of the actual neuroses, the essential facts have already been given in the lectures devoted to these forms of neurosis. It is characteristic of the etiology of the actual neuroses, which, as you have heard, is predominantly toxic, that in them as a general factor a pre-existing constitutional disposition—a predisposition—does not play so decisive a part as in the psychoneuroses; for it is obvious that persons whose nerves were previously perfectly sound are just as liable to a toxic sensitization of the vegetative nerve centers as the congenitally feeble or nervous individual. This holds good alike for neurasthenia and for anxiety neurosis. For example, the most normal and placid individual—even the athlete or the big game hunter who rejoices in the proverbial "nerves of steel"—may suffer, after a serious infectious illness—for example, a severe attack of influenza—from a toxic neurasthenia; or after severe concussion of the brain he may suffer for an even longer time from the symptoms of a commotional neurasthenia. In the same way, after suffering an extreme experience of terror a person who was previously robust and of perfectly sound nerves may develop a fright neurosis. An anxiety neurosis likewise, if it is very intensive, and if it was preceded by the long continued effects of libidinal accumulation, may afflict the strongest "intellectual athlete," and the less his previous experience of nervous conditions, the more disastrous may be its effects on his disposition. Of course, in the case of robust persons of completely sound nerves very much larger quantities of toxin will be needed to produce the same effects than in persons who had suffered previously from lability of the neurovegetative apparatus and a partial insufficiency of the hemo-encephalic barrier. As regards anxiety neurosis in particular it is clear that the limits of tolerance in respect of libidinal accumulations would be subject to very great individual variations, and in so-called

constitutional neuropaths the tolerance would be extremely small. Thus, an individual predisposition always plays an essential part in the contraction of an actual neurosis—though more in the sense of a quantitative factor. This physiological predisposition is also of decisive importance as regards the progress and issue of the neurosis, inasmuch as individuals in whom the hemo-encephalic barrier and neuro-vegetative system were previously intact recover more rapidly from the affection and are less liable to lapse into a chronic stage.

Those individuals who suffer from severe neurasthenia, anxiety neurosis, and fright neurosis, are generally distinguished by vegetative stigmata; they are so-called neuropaths, constitutionally prone to especially intensive neuro-vegetative reactions. The same individuals will also be especially liable to secondary psychoneurotic reactions, particularly if they suffer from an imperfectly compensated instinctual constitution (cf. Lecture 12).

To what extent the progress and issue of the actual neuroses are determined by this psychogenic factor—namely, the secondary reactions of the ego to the actual-neurotic symptoms, and how the secondary psychoneurotic overgrowths of the chronic actual neuroses almost inevitably gradually develop upon this reactive basis, was thoroughly expounded in the fifth lecture, in the section dealing with neurasthenia. We need not revert to the subject here. On the other hand, it should be realized how important it is from the standpoint of mental hygiene to recognize a spontaneous psychic overgrowth, and to deal with it by psychotherapeutic methods, as early as possible, and not only after the lapse of years, when it has already become firmly rooted and chronic. Apart from the appropriate medical treatment, due attention should be given from the first to the patient's psychic reactions to his symptoms, in order to deal effectively with the operations of *agglutinated causality* in *statu nascendi*. Above all, we should be careful to avoid any tendency to medical polypragmacy, in which every trifling change in the patient's condition, any intensification of a symptom, or the appearance of a fresh neuro-vegetative disturbance, is made a pretext for further complicated investigations and the prescription of fresh remedies. In such procedure there is always lurking the danger of arousing hypochondriacal fears in the patient (if they did not exist already!) and confirming him in the opinion that he is suffering from a serious

organic complaint. In this way agglutinated causality may be suddenly aggravated, and from this point secret feelings of guilt may easily be mobilized, through which the actual-neurotic symptoms are incorporated in pre-existing, unconscious (repressed) psychic complexes. But at this the originally pure vegetative neurosis has become a psychoneurosis, which, once it is fixed, and has become chronic, can be dealt with only with difficulty.

And now for the psychoneuroses. You have heard that the origin of these affections, in contrast to the actual neuroses, which can "overnight," so to speak, attack persons whose nerves have always been perfectly sound, is always dependent on the concurrence of a whole number of conditions; therefore there is always a long prehistory, reaching back into earliest childhood. This prehistory is essentially the history of the libidinal vicissitudes, as it is recorded in the mneme, on the one hand through the congenital instinctual constitution, and on the other hand through their operation in individual experience; that is, through the "complemental series" in Freud's sense of the term. But besides this historic factor we must, as we have seen, assume a morpho-physiological predisposition in the psychoneuroses, which is constituted partly by the composition of the chromosomatic inheritance (the genes), concerning which, as regards the neuroses, we know practically nothing (cf. Lecture 8, on Heredity), and partly perhaps by a primary insufficiency of the chemical stimulus-filter of the brain, and a congenital lability of the extra-pyramidal apparatus. We are obliged to assume the existence of such morpho-physiological predispositions as regards the primary symptoms of the psychoneuroses, which exist before all the mnemonic engraphy and are largely independent of the content of the neuroses for the time being. Among these are: the enhanced tendency to repression and affective conversion, the remarkable aptitude of converting repressed affects into physical innervation processes, the primary affective ambivalence of the obsessional patients, which is comparable with a failure of the reciprocal inhibition in the psychic sphere, the primary, increased preparedness for anxiety, and so forth.

The unbalanced nature of the instinctual constitution of the individual predisposed to psychoneurosis, which deviates from the normal in a perfectly definite direction, almost inevitably leads to

sharper conflicts with reality in early childhood than are experienced by healthy individuals with their balanced, harmonious, average instinctual constitution. These more or less violent encounters with reality sometimes result, even in childhood, in neurotic issues, especially when the constitutionally enhanced component instinct is confronted with an especially stern refusal. Then, even in this early phase of development, the effects of fixation make themselves felt. We find, therefore, in the prehistory of every sufferer from a severe psychoneurosis an infantile neurosis, and every subsequent psychoneurosis of the adult somehow connects itself with this infantile neurosis, just as in dreams the material of early infantile experience is resuscitated. Long periods of apparent health may intervene, only occasionally interrupted by brief neurotic reactions. These, as a rule, quickly disappear. In other cases, however, the first attack of the infantile neurosis has left permanent traces in the shape of a manifest alteration of character, which impresses even the lay observer; as in the case of the girl with obsessional neurosis whose clinical history you heard in the nineteenth lecture; when the formerly joyous and indeed exuberant child, after the denial inflicted upon her by her brother, conspicuously altered her attitude toward her parents, while at the same time the first aggravated obsessional symptom (the compulsion to wash) made its appearance.

But even where manifest neurotic symptoms are at first lacking, or where they make only transient appearances, the fixation on a certain early infantile component instinct is always accompanied by a turning away from reality; that is, by a more or less extensive limitation of relations to the objective world, to large sections of which the predisposed child is henceforth indifferent, or even averse. At the same time the child often loses touch with the normal sexual organization and the heterosexual partner. All the more passionately does the neurotic child attach itself to the parent of the opposite sex; here operates the fragment of object-libido which it has been able to rescue from fixation on the exaggerated component instinct. This explains why, in the analysis of psychoneurotics, we always find that the Oedipus complex fills such a predominant role, and why it plays such a decisive part in the neurosis—even in the symptom formation, especially in obsessional neurosis.

Hitherto the neurosis may have remained completely latent. So

long as the growing or grown-up child enjoys the love and security of his parents' home, he is as yet hardly conscious of his general impoverishment in respect of object-love; of his inability to love. Even in his relations with his parents this inability to love makes itself felt; the child has hardly emerged from the possessive egoistic phase, in which the impulse to receive love and tenderness prevails; for the active erotic tendencies have been repressed as inadmissible.

These infantile predispositions account for the fact that a neurosis breaks out with especial frequency—indeed, one may really say always—when life suddenly makes special demands on a nervously predisposed person, or, on the other hand, where it inflicts a grievous disappointment on him, or, lastly, when he has to make an important decision—as before marriage, or on finally entering a profession. For example, promotion to a responsible post may precipitate a severe neurosis; so that Freud, with reference to this fact, has defined a special type of neurotic, the type that is “wrecked by success.” The latent neurotic, who, on account of his inhibitions, feels that his instinctual development and his attitude to reality, which in many respects have remained in the infantile stage, are not equal to the new demands, returns more intensively than ever to the hedonic gratifications experienced in early youth, and to the objects of these gratifications. His wounded psyche flies, as it were, from the unpleasant reality, taking refuge, with a portion of its being, in the land of childhood. In other words: he takes refuge in the process which we designate regression and which we have observed, even in the lower animals, as a frequent consequence of the refusal or withdrawal of the instinctual object. In the neurotic person regression travels to the so-called “infantile points of fixation,” in the form of a recathecting of the supervalent component instincts with libido. But since the early infantile instinctual impulses are in irresolvable contradiction to the later cultural demands of the secondary impulses (of the superego), they are doomed to repression.

The regressed libido now seeks to throw off the repression and to help the instinct to irrupt. But the ego reacts against the threatened instinctual irruption with anxiety, and subsequently with counter-measures, designed at once to bind the anxiety and to provide a secure barrier against the dreaded irruption. It effects the displacement of libido on to harmless substitute objects or substitute situa-

tions—it compels the instinctual affect whose path to consciousness is bound to undergo conversion into bodily innervation processes—it safeguards itself against the return of the repressed by reaction-formations in the shape of compulsive actions and obsessive ideas; indeed, long before the outbreak of the symptoms it has adopted reactive attitudes against the danger of the repressed impulsive demands, which from the outset present a barrier to motor impulses in certain directions, and thus represent a solid characterological defense against the possibility of such instinctual irruptions. Only when the characterological armor is pierced can there be an outbreak of psychoneurotic symptoms in the narrower sense of the term.

The acute outbreak of a psychoneurotic crisis, with its more or less alarming symptoms, is almost always regarded by the patient himself as a serious illness. There is usually (and in the phobias, as is readily intelligible, always without exception) a definite sense of illness, in contrast to the lack of such awareness in the psychoses and psychopathies. Even persons in the patient's environment regard the trouble as serious at first—that is, as long as anxiety is in the foreground, or when severe conversion symptoms simulate an organic malady. This belief is eagerly adopted by the patient himself, since it is in agreement with his own conscious tendencies. Although he may have no knowledge, or only a very obscure apprehension, of the instinctual conflict which is taking place within him, he has always a more or less lively feeling of guilt, as a vague reflection of the reaction of his superego against the threatening irruption of the forbidden Id-tendencies. The interpretation of his symptoms as signs of a serious physical illness offers him, to begin with, a welcome diversion and appeasement of his feelings of guilt; he is not responsible for his condition, he has simply fallen ill—“*it* sent me to bed,” “*it* twisted my head to one side,” “*it* took me in the legs,” etc.¹ Further, in this state of mind he can only be thankful if his family, his friends, his employers share this conception of the organic nature of his illness, interpreting his anxiety as “heart attacks,” and his hysterical paralysis as an organic affection of the nerves. In this connection people often speak of an “unconscious feeling of guilt,”

¹ The frequent use of the word “it” in describing symptoms is, I think, generally indicative of the psychoneurotic nature of the symptoms and is therefore in itself of some diagnostic significance.

meaning thereby that the patient is perfectly sincere in mistaking the true nature of his symptoms. This, of course, is only partly true, for a feeling is always really present, and always conscious. The neurotic is unconscious only of the true cause of his feeling of guilt; he is therefore obliged to displace it upon other, external causes. This he does to a great extent; for example, he reproaches himself for being no longer able to provide for his family, for neglecting his professional duties, etc. Such self-reproach, which is lacking in real organic maladies, is always an infallible indication of the neurotic nature of the symptoms, or at least of a considerable psychoneurotic deposit in the illness. For a person suffering from an organic disease may well be anxious in respect of the economic consequences of his illness, but will never reproach himself for being ill.

The patient naturally adopts the same attitude in respect of the causes of his neurosis. The appearance of the trouble is attributed to all sorts of external circumstances, such as overwork, a chill, an infection, errors of diet, digestive troubles, etc., in short, there follows a secondary intellectual explanation or rationalization of the malady, which represents a countermeasure, a reaction of the ego against the illness. Thus, gradually, there grows up that system of self-delusions which justify the neurotics in respect of their illness, and behind which they take refuge as behind an impregnable wall. This mechanism can be most clearly perceived in the accident and insurance neuroses, a mechanism by which all the ailments, including even those that existed long before, are subsequently displaced upon the accident, often with a lack of critical judgment that defies description; for instance, it is by no means unusual for an accident neurotic to attribute his headache and dizziness, his neurasthenic stomach troubles, his backaches, etc., to an injury to the hand which was inflicted a long while ago, and which in the meantime has healed without leaving a scar. Here agglutinative causality celebrates its greatest triumph!

One would imagine that the neurotic who has fallen ill with a severe nervous attack would welcome every possibility of getting rid of his distressing troubles, and would do what he could to assist the physician. But this is by no means the case. As a matter of fact, he quite approves of any physical treatment; indeed, he not infrequently endeavors to prescribe to the physician the therapy to be

applied. He enters the consulting-room with a complete plan of treatment: He needs rest, a month's holiday at a health resort; he wants violet ray treatment, and above all sedatives and soporifics, in order to assuage his latent or manifest anxiety. But as soon as one attempts to uncover the real background of his malady, to trace the actual conditions of its development, in short, to deal with it by means of psychotherapy, he becomes evasive or even intractable; that has nothing to do with his illness; that is of no importance; that is an old story, and he has long ago got over it and forgotten it (and then he bursts into tears!). Or he protests; after all, he is not crazy; he knows himself well enough; he has nothing to conceal, etc. This opposition to the revelation of the psychic facts of the case has a threefold root: firstly, it is a characterological resistance, mainly of a narcissistic nature; the patient does not wish to admit that feelings which he secretly regards as weak and effeminate can possibly play any part in his case ("that I have seen him weak, that he can never forgive," says Schiller's Tell, speaking of Gessler). On the other hand, the resistance against the revelation of the unconscious springs, of course, from the same motives which were operative at the time of its repression, for this discovery is associated with the extremest unpleasure, and at first brings about an acute aggravation of anxiety. The resistance is therefore due also to the repressed contents; it is an outpouring of the same dread of the instinctual danger which once led to symptom formation. But there is also a third motive at work in this resistance. The patient does not only suffer from his neurosis; he also always derives from it a not inconsiderable, and to begin with an unconscious, hedonic gain. This becomes intelligible if you reflect that the psychoneurotic symptoms are compromise formations, in which not only the prohibitions of the forbidden instinctual activities proceeding from and enforced by the superego participate, but also these instinctual activities themselves. The symptom is therefore always maintained from both sides; not only from the side of the superego, but above all from the side of the Id. It enables the patient, with the aid of condensation and displacement, to obtain a certain, if merely symbolic gratification of the repressed Id-tendencies. This unconscious hedonic gain from the symptoms themselves we call the *primary nosological gain*. The acute psychoneurotic attack is preferably described by the patient as a "nervous breakdown," and, as

we have seen, is effectively disguised with the help of agglutinated causality. To begin with, it leads, above all, to a considerable diminution of the capacity for enjoyment, while the diminished power of working and earning may not be conspicuous for some considerable time, or is such that it can hardly be measured and verified. However, in severe cases longer or shorter interruptions of the patient's work soon become necessary, since medical treatment and periods of sick or convalescent leave are required, so that considerable dislocations of the patient's professional activities are unavoidable. The patient himself usually hopes great things from a long "rest cure," a hope which is in most cases, of course, illusory. A change of environment may at first be beneficial, so that the symptoms may be considerably alleviated, or may even disappear for the time being. But often enough a contrary result is obtained; thrown on his own resources in strange surroundings, in the peace of the hills he becomes for the first time the helpless prey of the anxiety arising from his conflict, and has to rush home in order to seek further medical treatment. But even in the most favorable cases the trouble usually recurs after the return to the old environment, and the patient discovers, to his distress, that the cure which had seemed to promise so much was in fact ineffective, and he has wasted time and money in vain. This too is understandable, if we remember how often the neurotic conflict revolves about the patient's nearest relations—his parents, his wife, his brothers and sisters—or is anchored to his employer or manager as a father-*imago*.

However, even when there has been no question of psychotherapeutic intervention, after a little while the acute attack not infrequently subsides spontaneously, passing into a more or less labile latent stage. This might be described as the stage of *compensated neurosis*, much as one speaks of a compensated cardiac defect. In the majority of cases no actual recovery has taken place; almost invariably the recovery is defective, and is characterized merely by the absence of the severer symptoms. This holds good even of those not so unusual cases where the patient has sought and found aid and consolation in religion. For even then, in addition to the largely successful sublimation of instinctual forces, which were previously bound in the neurotic symptoms, there is always the resulting character neurosis, the armoring of the ego against the dangers threaten-

ing from the Id, and the resultant rigidity of internal and external attitude, recognizable in numerous traits of character and certain peculiarities of behavior, and in neurotic characteristics which are generally as obvious to the layman as to the neurologist. Especially is this the case where on account of the patient's education, or his characterological inaptitude, such spontaneous sublimation is not possible. The neurotic alteration of character, even if it has not already taken place, is plainly perceptible after the first nervous breakdown. The patient can preserve his restored "health" only at the cost of sacrificing much of his pleasure in life, since the danger of a recurrence of the symptoms (especially in the phobias and obsessional neurosis) can be conjured only by the strict observance of a large number of avoidances, which at every moment operate as "prohibitions" making the patient more or less incapable of action. We have come across these prohibitions, and have already discussed them, in our lecture on the phobias and obsessional neurosis; they are those secondary reaction-formations of the ego, the various compulsive commands, prohibitions and avoidances, which the patient has to impose upon himself in order to hinder the ever threatening return of the repressed. In hysteria any activity of the unconscious impulses is checked by the physical conversion symptoms (especially conspicuous in the case of hysterical paralyses and abasias!) which have henceforth bound the greater part of the libido. At the same time the increasing restriction of the patient's personal freedom of movement inevitably evokes aggravated feelings of inferiority, for to the general consciousness that he is no longer able, or able only to a restricted extent, to fulfil his social obligations, is added the not always quite unjustified feeling that he is misunderstood, undervalued, even despised and ridiculed by his fellows. So the nervous invalid gradually severs all his relations with his environment; he becomes unsociable, misanthropic, solitary, out of touch with his fellows. It will not do, of course, to stigmatize this social isolation as the essential "cause" of neurosis, and to build up a whole theory of the neuroses on this secondary consequence, as Vera Strasser attempted to do. For it is obvious that this factor can never explain the nature of neurosis, but that such social isolation presupposes an already existing characterological change. Similarly, it may be objected to Adler's speculative theory that neurosis is essentially

an unsuccessful attempt to assert one's importance, an attempt with unsuitable means, whose last motive is to be sought in the striving for power. For here Adler, in his overestimation of the neurotic's feelings of inferiority, has merely confused cause and effect, describing a secondary consequence as the essential cause.

The stage of latency, the defective cure, is not as a rule of long duration. Sooner or later a new acute attack of the neurosis occurs; there is a second nervous breakdown, which this time has still more serious consequences than the first, and now, at last, the chronic final stage of manifest neurosis commences. In this stage the patient, unless psychotherapeutic help is available, has of necessity to put up with his sufferings, and accommodate himself to his neurosis as best he can. That is, he will adapt himself to it in a secondary manner. This adaptation will be facilitated by the discovery that his symptoms, however distressing they may be, none the less bring him certain advantages. He can henceforth, by invoking them, evade all the inconvenient claims and obligations of his profession and his private life; also, through them he can force those about him to treat him with greater consideration; exploiting them in a sort of erotic blackmail. He is always "too tired" to do anything that does not suit him; on account of his terrible headache he cannot keep the appointment he made yesterday; he cannot possibly appear in court the day after tomorrow—and he obtains a medical certificate to that effect; he could not stand the excitement; as for presenting himself for military service, in his condition, that is out of the question; he is in no state to take an examination; or, if he does so, when he is halfway through the examination he obtains a medical certificate to the effect that he is unwell, and in this way, up to the last moment, he avoids the catastrophe of eventual failure. In short, the chronic neurotic reacts, with increasing frequency, to all the harsher claims of reality by a "flight into illness," the symptoms always occurring just when he needs them. This refers above all to the symptoms of hysteria, and to phobic states; the symptoms of obsessional neurosis are as a rule largely independent of the external situation. Indeed, an obsessional neurosis may be successfully concealed for a long while from the outer world; it manifests itself inwardly rather than outwardly; it is, in a certain sense, a kind of "private religion," in correspondence with the strongly introversive character of the obses-

sional neurotic. It would, however, be quite incorrect to regard the flight into illness as a maneuver to which the patient resorts from time to time, deliberately, with fully conscious intention, in order to profit by it. The preliminaries of the "maneuver," at all events, are always quite independent of any conscious and deliberate volition. The difficulties of life, to which the patient—with good reason—does not feel completely equal, precipitate anxiety states, and these evoke the symptoms, which follow the paths of long established conditioned reflexes. In this way a sort of vicious circle is established, for it is only too understandable that the patient, who, to begin with, owing to his obscure and constant dread of life, approaches the difficult problems of life with hesitation, and doubting his ability to solve them, is hardly encouraged to grapple with them boldly when he feels himself further handicapped by the recurrence of his symptoms. And this just at the moment when he should be summoning up all his available psychic energies in order to cope with the real problem! Instead, he has first of all to apply a great part of his energies to combating his symptoms, so that they are lost for reality, and wasted. The neurotic, therefore, merely in coping with the manifold problems of daily life, has always to make a much greater psychic expenditure than the nervously healthy person, since even real difficulties are associated in a secondary relation with unconscious complexes, and have therefore the power of precipitating symptoms. They operate like symbolic threats of castration, and the patient reacts against them just as he used to react against these threats, namely with anxiety and flight. Under these circumstances he really cannot be too greatly blamed if in the end, in this unpleasant situation, he does not disdain the pitiful advantage, the secondary nosological gain, which his symptoms enable him to procure. Even if he gives them a little help, by conscious aggravation in the shape of a deliberate exaggeration of the symptoms by means of "artificial gaining of affect" (Kretschmer) we can no longer be surprised, nor is the physician justified in condemning such a practice with moral indignation.

On the other hand, the layman, who, as the observer most nearly concerned, is affected sympathetically by this neurotic behavior, cannot be greatly blamed if he finally loses his temper and now himself reacts against the situation with disagreeable irritability, especially

when he instinctively divines, in his ailing kinsman's attitude toward him, unconscious aggressive tendencies; for even the normal subject has his unconscious, and he therefore apprehends not only that which lies on the psychic surface, but he also registers what is in the background, and underground; things unuttered, which cannot be demonstrated and clearly expressed in words. The result is inevitably tension, and the heavily charged atmosphere finally discharges itself in more or less uncontrolled emotional outbreaks against the patient; the husband, one day, gives vent to his accumulated exasperation, and overwhelms his hysterical wife with a flood of reproaches; complaining, for example, of all the money wasted in useless treatments; he threatens to "take certain steps," and tells the patient plainly that he has long ago seen through her "so-called illness" as so much "hysterical play-acting," and in future he will take up a very different attitude. The hysterical patient is brought down to earth by this sudden aggression; she feels terribly hurt, and protests with an acute aggravation of her symptoms—on the one hand, because she has to punish her husband for his "brutality," and on the other, in order to give him indubitable evidence of the reality of her ailments, and so force him to acknowledge them. And so begins an embittered and stubbornly fought secondary battle for the authentication of the illness, in which conscious demonstrations (in addition to the real aggravation of the symptoms by the narcissistic mortification experienced: precipitated as conditioned reflexes) now play an essential part. But you must never forget that here we are always dealing with secondary developments—that is, with secondary reactions of the patient's ego to the unpleasant external situation, and that these incidents do not affect or exhaust the real inner character of the neurosis, as is often assumed by those who carelessly speak of "hysterical play-acting."

Of course, the development which I have just described is followed by the neurosis only when the latter is unaffected by the intervention of psychotherapeutics. Without such intervention, however, the majority of neuroses do end by following this painful development, and only a very few patients recover their health by a spontaneous change of direction; or even arrive at a half-satisfactory *modus vivendi* with themselves and their environment. By far the greater number, for years or decades, drag the heavy burden of their

ailment through life; though indeed with occasional remissions, which are often associated with a change of environment. In the course of time, too, a certain blunting of the sensibilities occurs, which leads to an alleviation of the symptoms and especially of the secondary reactions of the ego which have just been described, and the resulting conflicts with the environment. Also the gradual lessening of sexual tensions through the diminishing secretion of hormones will often—but not always—result in a substantial alleviation. Not always—for in many cases the mnemonic excitations and conditioned reflexes have through the decades entrenched themselves so deeply in the neuronic paths of association that the relevant connections have become indissoluble, and even psychotherapy, as a rule, cannot hope to break them. In later years—in patients, perhaps, of fifty and upwards—as Freud himself was quick to realize, a “great” psychoanalytic treatment is not, as a rule, very likely to prove effective, and may even be contraindicated. The psychoneurotic mechanisms now operate without substantial affective co-operation, and hence meaninglessly (since there is no longer any danger of unconscious urges to be kept at bay); they have become automatic and purposeless. We see the best instance of this in the final state of an inveterate obsessional neurosis, where the patient still performs his complicated compulsive ceremonial, although he himself no longer knows what imagined danger he is trying to avert. For example, the patient is still unable to touch any door handle with his bare hand, although he has long since forgotten that once, by this compulsive behavior, he was trying to avoid bacillary infection; or long after the death of the patient’s mother the compulsive ceremonial whose original purpose was to avert her death is still carried out with meticulous exactitude.

One remark in conclusion: We have seen that *neurosis is without exception a regression to infantile or archaic stages of individual and human evolution*. So, in certain respects, the psychoneurotic has remained in a state of infantilism. *Neurosis, in view of this regressive tendency, can in the last resort be conceived as an inhibition in the development of the instinctual life*, analogous to the organic developmental inhibitions of the brain, as we observe them in malformations of this organ. But this holds good only with a very essential restriction: For the developmental inhibition—the psychic infantil-

ism—always affects, in neuroses, only a strictly limited region of the psychic organism. *Even in the instinctual life the developmental inhibition is only partial; in all other directions, especially in respect of the intellect, the neurotic may be a psychically complete human being*, who may be capable of great and original achievements. His extreme affective sensibility, for example, may enable him to produce artistic creations of the most refined and subtle character, of which the robust “normal human being” would be quite incapable. We have evidence of this in the pathographies of great painters, authors, and scholars, many of whom were demonstrably neurotics. To name only one, there was Edgar Allan Poe, the subject of an admirable monograph by the Princess Marie Bonaparte, who examines the poet’s neurosis from the analytic standpoint; another such example was our great compatriot Jean Jacques Rousseau, to whom Demole has dedicated a brilliant psychiatric study.

Twenty-second Lecture
General Prophylaxis—Psychic Hygiene—
Therapy of the Neuroses

Ladies and Gentlemen:

We have now come to the end of our lectures, in which I have endeavored to initiate you into the general problems of the exploration of the neuroses. It will probably have struck you that I have dealt with the extraordinarily abundant material in a somewhat arbitrary fashion—at all events, otherwise than is usual in the chapters dealing with the subject in the medical textbooks. There the problem of neurosis is discussed exclusively under the psychological aspect, or, on the other hand, from the physiological standpoints of organic medicine. The psychiatrists, as a rule, incline more to the first way of regarding it; especially the professional psychotherapists; while the medical practitioners and specialists naturally tend to adopt the second standpoint. The two schools were, and are still to some extent today in conflict, and as a rule display little mutual understanding. In order to convince you of this I need only remind you of the violent differences of opinion in the early days of psychoanalysis—differences which even today are still unsettled. But if we approach the problems of the psychoanalytic exploration of the neuroses from general, biological points of view, we shall find, with increasing surprise, that there is no real—that is, factual—opposition between the physiological and psychological views of the neuroses; but that the two ways of regarding them are simply examining two different aspects of one and the same state of affairs. That, at least, was my experience, and for this reason I long ago did what I could to contribute to the settlement of this historic dispute. This may explain the somewhat unusual organization of these lectures, and serve as my excuse if here and there I have tried your patience with seemingly somewhat irrelevant biological explanations. These lectures, however, would be incomplete if they did not include a few

general hints as to the general prophylaxis and treatment of the neuroses. For in medicine a systematic treatise is never an end in itself; it should always ultimately fulfil the function of providing the physician with indications which will be of service in his therapeutic practice.

And first, as to the prophylaxis and psychic hygiene of the neuroses: Of course, it is impossible, within the limits of a general theory of the neuroses, to deal extensively with this eminently important branch of medicine, or to explain its methods in detail; I will therefore refer those who are interested in the subject to Heinrich Meng's excellent work on *Seelischer Gesundheitsschutz* (Mental Hygiene) which has appeared as the first volume in the series, *Wissenschaft und Praxis der Psychohygiene* (The Theory and Practice of Mental Hygiene). On the other hand, we may briefly touch on a few of the more general questions relating to the mental hygiene of the neuroses which have occurred to us during these lectures. As far as that goes, we have from time to time very briefly expounded many of the individual problems of the mental hygiene of the neuroses.

In respect of the neuroses, mental hygiene has two tasks to accomplish:

a) It should contribute to prevent, or at least as far as possible to check the formation and outbreak of neuroses, both in the individual, and within the population as a whole; i.e. as a kind of popular epidemic. This prophylactic task is gradually becoming more urgent, in view of the enormously wide distribution of the neuroses, and their increasing prevalence amidst the populations of most of the civilized countries, to which I referred in my first, introductory lecture. If, as was there recorded, a medical practitioner estimated that the neurotics who flocked to his consulting-room, year in year out, already constituted some 50 per cent of all his patients, and if, as you were told, among the innumerable sufferers from head injuries who come before the medical boards, some 50 per cent subsequently exhibit pronounced symptoms of a neurosis, or a strongly neurotic overgrowth on the organic cerebral clinical picture, such figures speak plainly, and show that something must be amiss with the body of the nation. In the opinion of many neurologists the prevalence

of the neuroses is due to the general social conditions of European civilization; it is primarily connected with the extensive instinctual renunciation which civilization requires of the individual, out of consideration for the community,¹ but which is also conditioned by the increasing aggravation of the struggle for existence and the difficulties encountered in maintaining the standard of life, which has constantly become more exacting with the rapid development of modern technique, with whose achievements no one is willing to dispense. The idyllic belief that "in the tiniest cottage there is room for a loving couple" is a thing of the past, at all events for the peoples of the cities. The breathless chase after money is becoming more than ever the main motive of all activities, ruthlessly over-riding all the profounder spiritual needs on which, after all, the true happiness of life depends. Very often, for example, even in the choice of a husband or wife, little account is now taken of personal inclinations and love, and he who swims against the social current in respect of such matters is soon conscious of the hostility of his environment, when he becomes involved in apparently insoluble conflicts, and is threatened with neurosis. At the same time, these obstacles result in the restriction and impoverishment even of the normal erotic existence, and this restriction and impoverishment are aggravated by the prevailing social hypocrisy in all questions of sexual life. Anxiety and shrinking from sexuality are the consequences which make themselves felt even in adolescence and childhood. They are fundamentally the same prejudices as those which August Forel attacked, years ago, in his work on *Die sexuelle Frage*, on the grounds that the principal source of these prejudices is a widespread ignorance. Even today an astonishing ignorance prevails in extensive circles of the population, so that to enlighten this ignorance is one of the chief tasks of psychic hygiene. But enlightenment regarding the problems of sexual life must not begin with the adult; above all, it must make a beginning during the education of the child, and this means, of course, that the teacher and the parents must be enlightened. Especially in the case of children who are thought to be endangered constitutionally or by inherited taints, prophylaxis should begin with the infant. This demand is based above all on two facts which you

¹ See Freud, *Civilization and its Discontents*.

can readily deduce from what you have heard in previous lectures. The first of these facts is the opinion, constantly repeated, based on the experience of all modern educators, that the foundations of character formation—and therefore, of the formation of the neurotic character—are laid in the earliest years of childhood, before the period of latency. For this early developmental phase is the period in which the various component instincts of the pregenital instinctual organization exert their predominance, and when under certain circumstances they may lay the foundation for the whole subsequent development of the child's character—and also for the defective development in the instinctual life, and in the character, which lies at the root of all serious constitutional neurosis. Here above all, then, it is essential to make a beginning with sound pedagogical principles, especially in respect of those points where one of the component instincts shows itself to be abnormally urgent and therefore difficult to control. The teacher of such constitutionally imperiled children will be advised to avoid everything that might attribute to a further hypertrophy of such prepotent component instincts, and on the other hand he will be given the necessary advice as to effective countermeasures. We cannot here, of course, enter into details regarding the application of such psychagogics in the case of the imperiled child; for example, in the treatment of anal defiance and obstinacy, in diverting unruly, aggressive, sadistic impulses toward harmless aims, so that they can afterwards be applied to cultural purposes; and in the treatment of early anxiety states (where any sort of castration threat must be avoided!). But this much may be said—that in the education of the young child, and of course in the case of the especially imperiled only child, excessive severity must be avoided equally with pampering excessive protection, and overindulgence. This latter mode of treatment may prove quite as injurious as unloving severity; it will avenge itself, sooner or later, if such children are accustomed to the belief that every stone will be removed from their path. By such an education you will deliver them unprepared to the harsh realities of life. The more one smoothes away all difficulties, the more unprepared will they be.

A second reason why, in the care of children with constitutional or inherited stigmata, one must make a beginning with prophylactic educational methods in the first years, and even in the first weeks and

months of life, is based on considerations of a biological nature. You heard, in previous lectures, that long before the formation of the ego—that is, before the existence of a real personality—the formation of the conditioned inhibitory reflexes begins, which oppose the unrestricted operation of the primordial instincts. "Education," in the first months of life, cannot, of course, as yet be applied to an ego of the child, since this ego does not yet exist; its task is, by consistent behavior—just as in training animals, in whom educative methods have as little to go upon—to create such conditioned inhibitory reflexes. Here is one example: There are unintelligent mothers who, whenever the unweaned infant disturbs them at night, get out of bed and for hours rock the child to and fro, or carry it about, in order to "quiet" it. This is naturally the best way of making the child repeat such behavior every night. If the mother consistently picks the child up only when it is due to be fed, its brain will soon grow accustomed to this arrangement; the necessary time-conditioned reflexes will be formed, and the child's sleep, like that of its parents, will no longer be disturbed by such interludes.

Another source of deficient power of resistance against neurosis, paradoxical though it may seem, is the modern system of insurance. Nowadays ever increasing numbers of persons are insured—voluntarily or compulsorily—against every imaginable eventuality; against accident and illness, against burglary and fire, against death, against inclement weather, and even against the consequences of their own stupidity (compulsory third party insurance). However much of a blessing insurance may prove to financially impoverished persons who are the victims of such misfortunes, time has shown that in practice this "hypersecurity" (as von Monakow has called it) has its serious disadvantages. In the long run it undermines the sense of responsibility, and the will to overcome one's misfortunes and difficulties by one's own efforts. Indeed, an increasing covetousness is fostered in certain circles by the consciousness of being insured, for if one has punctually paid one's premiums year after year one wants in the end to make something out of them when the contingency insured against has occurred—or even if one only believes that it has occurred. There is a danger that with such an attitude the accident, when it really occurs, is regarded frankly as a blessing; as the "big stroke of luck," which must be exploited to the utmost. And so,

in the case of previously neurotic persons, all nervous symptoms, including those of long standing, are projected upon the accident, which determines the character of the accident and compensation neurosis. Many physicians and jurists believe that the only way of curing this regrettable state of affairs is by legislation—namely, by amending the laws relating to compensation in such a way that in future such secondary and purely psychic sequelae of accidents would be excluded beforehand from compensation. In America another method has been adopted in many States, which is said to have been very effective. Lennon, for example, reports that in the Bethlehem Steel works special welfare workers have been appointed, whose duty it is, in addition to their ordinary activities, closely to observe and record the family circumstances of the workers. Employees, who, according to the records of the welfare officers, are of unstable character, litigious, or involved in domestic difficulties, are immediately sent to the psychiatrist for prophylactic treatment. Out of 6000 victims of accidents, thanks to this procedure only 5 cases were referred to the court of arbitration for the settlement of claims for compensation. This is certainly a triumph for a systematic psychic prophylaxis based on scientific knowledge; an example which Europe would do well to follow. In respect of social welfare, far more is done for accident neurotics in the U.S.A. than in Europe (cf. the fine work of Mitchell, Betsey and Stanley Cobb), where these unfortunate people are left too much to themselves and their misery. There is no doubt that prophylaxis will prevent a neurotic who finds himself in the grip of an insoluble conflict from actually seeking an accident, or unconsciously “making one” (as the victims of such accidents often express themselves in unconscious self-betrayal).

b) The second important concern of mental hygiene is the case of latent or already manifest neurotics. Here again it must extend its activities to the patient's surroundings, his milieu, and in a wider sense to society as a whole, rather than to the patient himself. Thus, its task is in the widest sense one of enlightenment and here the family doctor plays a decisive part. This amounts to saying that the enlightenment—as to the nature of the neurosis—has to begin above all with the medical profession itself, of whom a greater interest in psychopathological questions and a greater awareness of the practical importance of a thorough understanding of this branch of psychology

should be required. For after all, the family doctor is the first to intervene in such cases of illness, to take the necessary therapeutic measures, and above all, to instruct the patient's relatives as to the nature of the trouble and the most expedient attitude to adopt in respect of the sufferer. How much depends on this last point as regards the further course of the illness—namely, on the attitude of the patient's relatives—you heard in the last lecture. By the thorough and timely enlightenment and instruction of those persons who come into contact with the patient these secondary collisions and conflicts which end by driving the patient to take refuge in the "flight into illness," and lead to the serious aggravation of his condition, may be avoided. Secondly, it is incumbent on the family doctor to indicate the nature of the treatment to be applied—that is, to decide whether the patient shall be sent to a professional psychotherapist for a thorough treatment of the chronic trouble by a bathypsychological method. As you have heard, the difficulty here is to overcome not only the resistance of the patient, but the misgivings and resistances of his relatives. Freud himself once made the characteristic remark that the most difficult task of the psychoanalyst is not the treatment of the patient himself, but the handling of his relatives.

And now we come to the therapy of the neuroses. This is generally simply equated with psychotherapy. But those who so equate it are forgetting that among the neuroses there is one group in which the functional disorders—at least, the primary disorders—are organically, and principally toxically conditioned. These are the actual neuroses, which we discussed at length in the fifth and sixth lectures. You then heard that neurasthenia, anxiety neurosis, and fright neurosis are due mainly to pathological sensitization processes in the vegetative nervous system, the sympathico-adrenal system and its centers in the diencephalon being primarily affected. Here medical treatment may have the most excellent results, especially in early cases, in which the secondary psychoneurotic overgrowth has not begun to play an essential part. Sometimes, in serious, acute anxiety states—the "kakon-crises" of acute anxiety neurosis—we can hardly avoid, and indeed are occasionally compelled to resort to the use of soporifics, and for the time being even the alkaloids of the morphine group. Apart from these very serious and alarming acute conditions,

in the actual neuroses especially medication is indicated which on the one hand desensitizes and soothes the sympathetic system, and on the other hand encourages the antagonistic reflex processes in the parasympathetic system. Needless to say, one must not proceed in an uncritical and schematic manner, for in neurasthenia the parasympathetic itself plays an essential part in certain symptoms, so that here by a one-sided stimulation of the vagus actual harm might be done. Here, as everywhere in medicine, each case must be treated individually. Generally, however, in the actual neuroses, I have found Bellergal "Sandoz," a preparation of atropin, ergotamin (gynergen), and a small dose of luminal, to give the best results, as this remedy is most effective when a reactive action on the sympathetic is expressly indicated. I begin the treatment, as a rule, with a stiff "Bellergal-shock" of 2 tablets 3 times daily, when the third dose may be given half an hour before going to bed; if need be it may be increased to 3 tablets for the first few days. After a few days one can reduce this to 4 and finally to 3 tablets a day, which latter dose can without hesitation be continued for several weeks. Under some circumstances, especially in all cases where vascular spasms in definite regions of vegetative innervation are the cause of certain symptoms, an injection therapy with acetylcholin "Roche" will be advisable, as this remedy is a hormone-like substance with a specific stimulative action on the parasympathetic. The two remedies—Bellergal and acetylcholin—are not incompatible; indeed, each rather enhances the effect of the other, so that they can, on occasion, be suitably given in combination.

Of course, the treatment of the actual neuroses need not and will not be restricted to an exclusively medical therapy. In both forms of the affection one will, before everything, endeavor in every case to discover the cause of the disorder, and then set to work with further and causally operative measures. This is not the place to describe these remedies in detail; they will suggest themselves when we consider the various originating causes of neurasthenia and anxiety neurosis, for which I must refer you to the lectures on these disorders. But a word as to the therapy of anxiety neurosis. You have heard that an essential cause of this disorder—that is, a condition which is never absent—is an acute damming-up of libido. Here, then, by medical treatment one can deal only with the symptoms. So long

as the essential cause, the accumulation of libido, is not removed, an actual cure cannot be achieved. Apart from a merely symptomatic therapy, our task will consist above all in discovering, by cautious and indefatigable exploration, and by questioning the patient, the present cause of the libidinal accumulation, and to make it clear to the patient that he himself is in a position to remove the cause of his troubles, to abandon the unsuitable sexual regime which he has hitherto followed. This is a task for the psychotherapist, and one of the most rewarding that falls to the lot of the physician. It is also comparatively simple; it can be performed by any practitioner if the necessary data are at his disposal. Even in severe and acute cases I have often achieved the desired result in a few sessions (three or four).

Matters are very different if we have to deal with an actual neurosis which has already reached the chronic stage, and in which there is a considerable secondary psychoneurotic overgrowth. In such cases a long continued medical and physical therapy—even a rest-cure—will do little more than in the case of a pure, primary psychoneurosis. Here, ultimately, such treatment will affect only the symptoms, while the secondary psychoneurosis, which in the majority of such chronic cases governs the whole clinical picture, is refractory to all medical and physico-therapeutical treatment, and remains unaffected. Here a permanent result can hardly ever be achieved without a causal psychotherapy.

This holds good *a fortiori* for the primary psychoneuroses; that is, for the clinical pictures of hysteria, phobia, and obsessional neurosis, and also for the character neuroses. The mere fact that in the psychoneuroses in the narrower sense of the term a merely symptomatic therapy is, in the long run, almost always ineffective, or at best leads only to temporary suggestive results, is evidence of the eminently practical importance of the psychobiological studies and explorations which we have undertaken in these lectures. For on the solid knowledge which we have thereby acquired depends the reliable differential-diagnostic distinction between actual-neurotic and psychoneurotic disorders (think, for example, of the distinction between anxiety neurosis and phobia) and therefore, ultimately, the indication of the therapy to be applied. In a discussion of the psychotherapy of the neuroses we cannot, of course, within the limitations of

these lectures, enter into the details of technique and method; for here, as in the discussion of psycho-hygienic problems, the most we can do is to indicate certain general directions to be followed, directions which can be deduced from our psychobiological knowledge of the nature of the psychoneuroses. But first a preliminary remark, in order to prevent misunderstanding.

I have just declared that in the psychoneuroses, as primary psychogenic functional disorders, logically and on principle only a psychotherapy is practicable. This must not be taken as meaning that we must rigidly and dogmatically exclude and reject beforehand every medical or other organic treatment. Even here there are cases in which severe and acute symptoms, in particular extreme conditions of anxiety or excitement, compel us, for once in a way to surrender a principle which is intrinsically correct, and to intervene with sedatives, in order to bring "first aid" to a suffering patient who in his present condition would be absolutely inaccessible to psychotherapy. But we ourselves must clearly understand, and we must make it plain beyond a doubt to the patient himself, that we are merely applying a symptomatic therapy, an emergency treatment, so to speak, which must be followed by the actually causal therapy. Nevertheless, the witty expression of the psychotherapist who once described psychotherapy as an "anti-bromide movement," is completely justified.

Before we deal with the general problems of the psychotherapeutic methods in the treatment of the neuroses, we must dispose of one criticism of psychotherapy which is often made, not only by laymen, but occasionally by physicians. It is difficult, they say, to understand how one can affect or even cure pathological conditions "by merely talking." Such a procedure has after all no material basis. At all events, there can be no question of a science of psychotherapy. I cannot refute this criticism, which actually questions the theoretical possibility of psychotherapy, than by the following words, which Freud has written in the introduction to his famous *Introductory Lectures on Psychoanalysis*: "The patient's unenlightened relatives—people of a kind to be impressed only by something visible and tangible, preferably by the sort of 'action' that may be seen in the cinema, never fail to express their doubts as to 'how one can do anything to cure illness by mere talking.' This is, of course, both

short-sighted and inconsequent. These are the very people who are so certain that the patient is 'merely imagining' his symptoms. Words were originally magical, and even today the word has retained much of its magic power. By words a man can make other people happy or drive them to despair; by words the teacher transfers his knowledge to his pupils; by words the speaker carries his audience with him and determines its judgments and decisions. Words evoke emotions and are the universal means of influencing our fellow-creatures."

But if there should be among you an impenitent skeptic, who would like to know how one can represent the operations of psychotherapy physiologically, I should tell him, as I told the student who did actually ask me this question after a lecture: Well, you must imagine, for example, that by the soothing and relaxing affects which one seeks to evoke in the course of the psychotherapeutic consultations, corresponding parasympathetic reflexes are released in the patient, which extinguish the existing chronic sympathico-adrenal anxiety excitations and abolish them permanently. Think, more especially, of what was said in the seventh lecture concerning the direct effects of hypnotic suggestion and analytic therapy on the diencephalon; you heard how these effects utilize the reflex paths leading from the forebrain to the ganglia of the stem and the medial nuclei of the thalamus, and there release blockages, so that—especially in hysteria—the apparatus in question is again made accessible to the critical influence of the cerebrum.

In modern psychotherapy we make a fundamental distinction between symptomatic and causal methods of treatment.

Among the symptomatic methods are all those that make predominant or exclusive use of suggestion, conscious or unconscious. Among these methods, in addition to ordinary waking suggestion, are hypnosis and the so-called "rational psychotherapy" of Dubois. The chief aim of waking suggestion is to "talk the patient out of his symptoms"—that is, to awake in him, and confirm, a conviction of their unimportance, and even their nonexistence, and so to strengthen his "will to health." But here again one must distinguish between indirect, unconscious, or rather disguised suggestion, and direct suggestion.

We apply an indirect, disguised suggestion if, for example, we give a patient an injection of distilled water, or give him water col-

ored with methylene blue to drink as a "medicine," telling him that this remedy will infallibly banish his symptoms. In these cases the suggestion is of a completely general nature; it is a somewhat crude expedient, which always smacks of deceit and dishonesty. The more educated and intelligent patients often see through it, so that with them such suggestions are without effect. With feeble and hysterical patients and young children, on the other hand, such masked suggestions may sometimes be very effective. They were successfully employed by Charcot.

An essentially different procedure is followed in direct suggestion, which is always aimed directly at the pathological symptom in question, endeavoring to influence and alleviate it by the magic of words. Friedrichs, Jolowicz, et al. have, however, correctly pointed out that even direct waking suggestion does not address itself to the patient's intelligence, but is ultimately an instinctual process, in which the affectivity plays the leading part. Friedrichs quite correctly derived suggestibility from affective sources and regarded it as paralleled by the instinctually conditioned obedience of children.

On the other hand, Ch. Dubois claimed that with his "rational psychotherapy" he addressed himself directly to the intelligent judgment of the patient, inasmuch as he endeavored, by long and urgent talks, to convince him of the baselessness and indefensibility of his symptoms (especially in phobic anxiety states). Today we know that in this respect he was entirely mistaken, and that his method was really nothing more than a refined suggestive therapy, which ultimately addressed itself not to the patient's intelligence, but to his affectivity. However striking the result of the various methods of suggestive therapy, the "cure" effected by them is almost always only temporary and apparent. The unconscious conflict persists and sooner or later it will cause the repressed impulses to seek another outlet, when they repeatedly threaten a further irruption. We will take for example the favorable result obtained in a case of phobic anxiety by Dubois' method. It is demonstrated to the patient, by all the resources of eloquence, that his anxiety is senseless and unreasonable. But by this means we are merely addressing ourselves to the displacement substitute, to which the repressed instinctual impulses have attached themselves. Eventually we have convinced the patient of the harmlessness of the dreaded object or situation; and for a time

—perhaps for ever—the conditioned reflexes are no longer released by this object, by this situation. But the unconscious instinctual danger has not, of course, been abolished, so that one day the patient will suddenly be seized with dread of another object, a new situation, which henceforth appears vicariously as a displacement substitute for the real thing. It is the same with hysteria: if at last, by a combination of symptomatic, physical and suggestive therapy it has been possible to quiet the severe actual symptoms, one day the fire smouldering under the ashes suddenly breaks through at another place.

Much the same may be said of hypnotic suggestion: This, too, is not causal in its ultimate results, however rapid and impressive and lasting the improvements which it is generally able to effect. However, hypnosis, unlike ordinary waking suggestion, penetrates to the unconscious, and so operates more effectively at greater depths. In this case we are to understand this quite literally, since hypnosis actually takes effect upon the centers and paths of the diencephalon lying deep in the brain-stem. But hypnosis likewise never leads to a real settlement and liquidation of the unconscious instinctual conflict. Like all the other suggestive methods, it operates like a narcotic on the instinctual conflict, inasmuch as it leads to a still deeper repression of the Id-tendencies.

We can therefore describe the suggestive methods of psychotherapy as “concealing methods,” inasmuch as they all cover up and camouflage the instinctual conflict instead of revealing it to the patient by discovering its causes, and thereby making it conscious and enabling him to liquidate it permanently. It must be admitted, however, that by all these methods the active defensive powers of the character and personality are mobilized; so that they tend to reinforce the ego as against the Id. This is true also of the auto-suggestive methods, like that of Coué, and the so-called “autogenous training” of Schultz; a method which has adopted certain Oriental exercises in psychic self-control, such as yoga, and which does actually achieve a remarkable control even over vegetative processes which are otherwise inaccessible to the conscious influence of the will.

In contrast to these, we may describe the bathypsychological methods of psychotherapy, and above all Freud’s psychoanalysis, as “discovering and revealing” methods. After what has been said I need not comment on the meaning of these terms; you will understand

them without further explanation. In order to avoid misunderstanding, I had better explain that since I myself, in my psychotherapeutic practice, employ only Freudian psychoanalysis, the following remarks apply exclusively to these bathypsychological methods.

In contrast to the suggestive methods, which address themselves mainly to individual symptoms, psychoanalysis embraces the whole human being, for by this therapy we aim at nothing more or less than the alteration of the whole attitude of the neurotic individual, including an alteration of his character, as far as this is possible.

As to the "fundamental rule of psychoanalysis," you were given the essential facts in the second lecture, so that here I need not revert to details. In practice, however, there are generally sensible difficulties in the way of observing this fundamental rule. Many patients respond at first with silence to the requirement that they have to communicate, uncritically, everything that passes through their minds. This "analytic silence" is their first "resistance," and a resistance which does not relate merely to contents of experience worth communicating, but which just as often, and indeed usually, corresponds with a general disinclination to confide everything to the physician. The narcissism of the patient rebels against the whole situation from the outset; he finds it not only embarrassing, but in some way humiliating. This resistance is therefore a narcissistic characterological resistance. Further, in the course of treatment we always encounter an interesting phenomenon which Freud described as "transference." This transference, in the case of female patients, generally takes the form of a direct transference of accumulated erotic feelings to the person of the male analyst, and is then described as positive transference. Its correct treatment calls for an equal degree of tact and of wise ascendancy on the part of the physician. So long as the patient, under the powerful and encouraging influence of this positive transference, willingly submits herself to the cure, and complies with the fundamental rule, so that her communications are fluent and profuse, and so that in this way a quantity of pathogenic material is revealed, the analyst has no occasion to intervene. But presently the situation is altered; for in the long run it is inevitable that the patient gradually becomes aware of the awakening of her erotic feelings—for example, through her dreams, which assume an increasingly erotic character. She reacts to them with a new

resistance, the transference-resistance. In this way a very delicate situation develops, which gradually threatens very seriously to disturb the course of the analysis, or even to make it impossible. The inevitability of this form of positive transference has always excited misgivings, not only in lay circles, but also in the medical profession, and has led to prejudices in respect of psychoanalytic therapy, against which we still often enough have to fight in vain. The critics forget, however, that transference is by no means a process peculiar to psychoanalysis; it makes its appearance constantly in all medical treatment. It is actually a precondition of all efficacious medical activity that there is, ultimately, always a trace of "erotic transference" at the root of the customary "confidential relation" of physician and patient. The only difference is that in psychoanalysis the patient becomes at last fully aware of these feelings, and even has to be made aware of them, since the transference, as you will presently learn, is here, as in no other medical treatment, the turning point and essential presupposition of a successful cure. Above all, in psychoanalysis the transference itself becomes a subject of analytic treatment, instead of remaining in the unconscious, or being consciously camouflaged. The attitude of the analyst to this phenomenon is naturally fundamentally different from that of the physician who deals with his patients' bodies. Whereas the latter, directly he realizes that a female patient is regarding him with romantic interest, is either distressingly embarrassed and even annoyed, or he ascribes this result to the peculiar merits of his professional personality, and enjoys the situation with narcissistic naivety. The analyst is aware beforehand of the fact that the transference has nothing to do with his personal charms or professional capacities; the simple truth is that the erotic impulses liberated from repression in the unconscious were inevitably transferred to the first available object, and this object is the analyst. *The transference is therefore a biological phenomenon, which invariably occurs when released libido—that is, instinctual energy—has been deprived of an object, or has broken away from a particular tie.* You have already met with this phenomenon of transference of affect to other objects when the original object is lost in the thirteenth lecture, when we saw that it occurs even among the lower animals, such as insects. And you will now understand what I meant when I said that transference is the turning point and neces-

sary presupposition of a successful psychotherapeutic cure. For in curing him we seek to liberate the patient from his neurotic fixations; the beginning of transference to the physician is the sign that this liberation has already commenced and will probably be successful.

On closer analysis of the transference it invariably emerges that the physician is nothing more than the representative, the imago of the former erotic object to which the patient's libido had hitherto been bound in neurotic fixation. For example, the woman patient transfers all her father's qualities to the analyst: she even projects into him qualities that he does not in reality possess; in short, she gradually abreacts upon the analyst the whole of her repressed Oedipus complex. But the male patient does precisely the same; even for him the analyst, as a rule, becomes the father-imago, and he behaves toward him, at the beginning of the treatment, and to the end of the transference—that is, until nearly the end of the analysis—just as he behaved to his father when he was a child, and later on, to various persons in authority. This means that there is not only a positive, erotically loving transference, but also a negative transference, and that in male patients this negative transference to the male physician generally, in the beginning, plays the principal part. Hostile silences, obstinate aversion, and fear of the analyst are therefore often the forms assumed by the characterological resistance in such analyses; but the negative transference may conceal itself beneath all sorts of masks, such as conspicuously stiff correctness of behavior, or excessive politeness and obligingness. Thus the patient behaves toward the analyst precisely as he behaved toward his former objects of love and anxiety, and manifests toward him the same secondary reaction-formations as those which he built up in childhood as his “characterological armor” against those objects. Also, in the analytic situation he manifests the same repetition compulsion which he had manifested over and over again in his relations to the object of the neurotic fixation. In short, in the beginning of the analysis he lives his neurotic fixations of affect over again, but with the difference that this time he displaces them upon the analyst, thereby making them, little by little, henceforth, accessible to analysis—that is, to consciousness and modification. This holds good also of the content of the various pathogenic Id-tendencies which lie at the root of the

instinctual conflict. It always emerges finally that the patient ultimately anticipated from the analyst the gratification of these various infantile instinctual wishes. One can really say that in the course of time the original neurosis has changed, during the analysis, into a "transference neurosis."

The task of the analyst, therefore, now consists in gradually making all these tendencies, relations, and processes perceptible to the patient, and so finally resolving the transference. Above all, he has to show how the patient, in his various reactions, is only repeating former modes of behavior and wish impulses, which he had experienced in a precisely similar way in neurotic fixation on the objects of his childhood; so that his present relations to the analyst are nothing more or less than transferences of those former experiences and relations; so that his love, his hatred, his fear, etc. do not in reality refer to the person of the analyst as such, but are merely projected upon him as imago. That in all this there can of course be no question of entering into these projected wishes in the sense of complying with them should be sufficiently evident to you after what has been said. The analytic cure must rather, as Freud always urgently insisted, "be carried out in renunciation," since only thus is the discovery and resolution of the neurotic fixations possible. This amounts to saying that such "medical" advice as would persuade a patient that he has only to "live out his life" (i.e. take a mistress) and all would come right of itself, is never given by the analyst; if only because neurotics are to a great extent persons who are incapable of love. They would hardly know how to set about taking such advice.

For example, I have repeatedly heard from patients that they had formerly been advised by doctors to use preservatives—in the hope that being conscious of possessing this reliable protection their dread of women would vanish spontaneously. But what happened in reality? The patients used the protective device merely in order to continue and enhance their autoerotic imagined gratification!

From what has already been said it is clear that psychoanalytic treatment is not restricted to "interpreting his symptoms to the patient"; it is not a mere method of interpretation. It is rather a thoroughly dynamic process, in which, as we have already indicated, the whole personality of the patient is involved, so that the very foun-

dations on which his neurosis has built itself up are shaken. This "analytic shock" (von Hattingberg) is the most essential feature of the analytic therapy; it does not consist so much in the intellectual understanding which the patient acquires of the structure of his symptoms, as in the affective experience which first reveals the relevant connections to the patient and so makes it possible to release the hitherto symptom-bound instinctual energies from their infantile fixations and so to resolve the instinctual conflict. That this process is not possible without severe internal and external struggles (even with the analyst, as the representative henceforth of the objects of infantile libido and hatred) goes without saying; a psychoanalytic treatment makes great demands upon the physician, and, of course, above all upon the patient—demands on their powers of self-discipline and the will to persevere. This refers most especially to cases in which the foreground is occupied not by such alarming symptoms as phobic anxiety states or massive hysterical conversions, but rather by psychoneurotic characterological disturbances. Such character neuroses usually call for a special analytic technique, such as that developed by W. Reich, and exhaustively described in his book on *Charakteranalyse*. In this method the interpretation and resolution of the characterological resistances take precedence of the interpretation and resolution of the symptoms. Above all, the resistances, wherever they show themselves, have to be attacked and analyzed. The emphasis is at first no longer on the content, but on the particular form and nature of the resistance; first the patient is shown that he has resistances; and then, how he offers resistance; that is, how in offering resistance he behaves in a typical manner, corresponding to his neurotic character; and at last, why he offers resistance, and against whom (firstly, of course, against the analyst as the present imago). Only from this point—that is, only after the patient has been made aware of the object, the nature, and the meaning of the resistance—can he be shown how he has always offered the same form of resistance to all former, similar persons, and why he has done this. In this way, quite spontaneously, access is afforded to the repressed infantile experience-contents, which have engendered this special manner of reacting and offered the special characterological resistance. The way to the resolution of the affect-fixations is open,

and the resolution is achieved in the only way in which a lasting result can be obtained—namely, by intensive affective outbursts.

The *analysis of children*, especially of very young children, naturally demands a special technique; for in the child the intellect is not as yet so far evolved that we can make use of it as an instrument; the child cannot communicate its inward experiences in a sufficiently differentiated and intelligible form; it cannot give us a satisfactory account of what is happening in its mind. Moreover, as yet the superego does not exist; at this stage it is still identical with the bodily forms of parents and teachers. As yet, therefore, there can be no question of a real transference to the analyst; the child's relation to him can be formed only on the basis of a new and actual attachment. Hence Melanie Klein, in order to obtain access to the inner processes, developed a technique of "play analysis," proceeding from the correct hypothesis that the child acts his inner processes in play and projects them on the object of his play. Above all, Anna Freud's exhaustive investigation of the special conditions under which the analysis of children should be undertaken are of the greatest value. Only through her researches were the methods to be employed, which differ completely from those to be followed in the analysis of adults, clearly explained. A comprehensive account of the premises and indications of child analysis was given by H. Meng in 1939, in *Psychoanalytische Erziehung und Kinderanalyse* (Psychoanalytic Education and Analysis of Children) and we owe an excellent, concise, and easily intelligible description of modern education on a psychoanalytic basis to the child-analyst Ada Berna-Citroën, whose too early death is greatly to be regretted.

A question which has caused much discussion in medical circles is this: Should laymen be permitted to practice as psychoanalysts? Freud himself had previously answered this question in the affirmative, for definite reasons; for one thing, he held that laymen were free from certain prejudices of which the qualified physician can rarely divest himself. The layman, however, will never be capable of making a differential diagnosis between organic conditions and purely psychogenic symptoms; for example, between a neurosis and a latent or incipient schizophrenia. In my opinion, therefore, in the interests of mental hygiene, lay analysts should be allowed to practice only in the closest collaboration with qualified physicians;

at all events, they should not undertake any case which has not previously been subjected to a thorough medical examination, and in the course of an analysis they should always insist on a further medical consultation if they should be in any doubt as to the psychogenic nature of a symptom.

From all that has been said you will have come to realize that the cure of a psychoneurosis is not identical with the mere disposal of its symptoms. An actual cure, excluding with certainty the danger of subsequent relapses, must before all make the patient independent; that is, he must be able henceforth to deal unaided with all the difficulties and conflicts of life, and free to decide for himself on his future course and manner of life. These are matters that touch the very core of the personality. Although we are not in a position to change the nature of this core, since it is ultimately based on the constitutional instinctual disposition, which everyone brings into the world as his inheritance, it is none the less possible, by bathypsychological methods, very largely to influence the embiontic consequences of this inheritance, and to prevent, permanently, such unfavorable effects as would lead to the development of neuroses. In order to achieve this result an analytic treatment of many months' or even many years' duration is usually essential. Unfortunately, such tedious treatments are often impracticable, if only for external reasons. But even where for these reasons such a *therapia magna* is not possible, the analytically trained physician can still always achieve results in the case of neurotic patients by a psychotherapy derived from the analytic standpoint which could not be obtained in a like degree by any other method of treatment. Even though in such a "lesser psychotherapy" on an analytic basis he has "to alloy the gold of analysis extensively with the copper of suggestion," as Freud once put it, he will nevertheless be able to give his patient a profounder understanding of the nature of his illness than he ever before possessed, and to discharge psychological tensions, so that unless fate has the most exceptional vicissitudes in store for him he will be free from symptoms for many a year to come, and so be practically cured.

Thus, I once succeeded in dispelling a severe and acute obsessional neurosis, with anxiety hysterical superstructure, in a young woman (*nota bene*, an insured patient) in twenty abbreviated sessions. The neurosis had broken out

after the death of her mother. Not until twelve years later, during which time the patient was free from symptoms, did she suffer a relapse, and this again, significantly, after the death of a relative—her mother-in-law. In twelve further sessions it was possible to cure this relapse.

By former pupils of Freud, who were under the influence of the master during the early period of his analytic practice, but who afterwards left him and went their own way, the opinion was subsequently advanced that in order to obtain a complete cure it is not enough merely to analyze the patient—that is, to resolve his pathogenic complexes. The analysis of the patient in Freud's sense of the term, indispensable though it may be for the "reduction" of the symptoms, and of present difficulties, and the transference to the material of infantile experience, should be followed in the majority of cases by a synthesis. Only by this synthesis—in the opinion of C. G. Jung and A. Maeder—it is possible to reveal his true "self" to the patient, and so to disclose his future task in life, his place in the world. In a word: a certain amount of psychagogics—of deliberate spiritual guidance—must always be administered to the patient. We cannot agree with this opinion, or at least, we can give it only a qualified approval. In the first place, psychoanalysis should once and for all educate the patient in independence, inasmuch as it releases his psyche from its infantile attachments and so restores it to present reality. But this degree of adaptation to reality will not be enhanced if one plays the part of a priest in guiding his steps in the world. In the second place, we always find, in the course of analytic treatment, that the adaptation to reality gradually takes place quite spontaneously, without the physician's intervention: in proportion as the release from infantile fixations is effected on the one hand, and on the other hand, the reduction of the transference, the patient, as a rule, takes the reins in his own hands. He is now in a position to determine his future destiny for himself, as far as it depends on his own decisions; that is, he is free to sublimate his libido, over which he now disposes freely, in a course of life which he perceives with renewed vision, or he can gratify it in new human attachments, which this time will be more in accordance with reality. And thus the liberation from the analyst, the final resolution of the transference, follows as a natural consequence of these newly formed connections. With this, psychoanalytic treatment has

achieved the end posited by Freud: Restoration of full capacity for work and enjoyment, harmonious reintegration in the social community, and recovery of normal affective contact with the environment. These signs of spiritual health are the self-evident postulates of Freud's criteria of a cure.

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GLOSSARY OF THE MORE IMPORTANT SCIENTIFIC TERMS

- Abasia: inability to walk.
- Acromegaly: abnormal growth of extremities (hands, feet, chin) with excessive functioning of the anterior lobe of the pituitary gland.
- Agoraphobia: dread of open spaces.
- Ambivalence: irresolute wavering between two attitudes, because both are equally charged affectively.
- Amblyopia: weakness of vision.
- Amnesia: loss of memory.
- Anal: relating to the anus.
- Anankotropic: tending toward obsessional neurosis.
- Anastole, apathetic: inhibition due to lack of excitation.
- Anesthesia: insensitiveness.
- Animal (cerebrospinal) nervous system: the sensory and dynamic system directed toward the outer world (brain, spinal cord and peripheral nerves).
- Animism: primitive man's belief that all natural objects have souls or spirits.
- Anthropology: the science of mankind.
- Apraxia: loss of the capacity of combining the movements of the limbs in purposeful action.
- Aspontaneity: loss of the capacity of acting on one's own initiative.
- Atavism: regression to a racially older form or manner of behavior.
- Ataxia: uncertainty of movements.
- Autoerotism: gratification of the feelings of love and lust in one's own body.
- Autosuggestion: an idea of which one has persuaded oneself.
- Babinski reflex: a slow dorsal reflex of the great toe on tickling the sole of the foot, occurring only in lesions of the pyramidal path from the cerebral cortex to the spinal cord.
- Basedow's Disease: a disorder of the thyroid gland, with excessive functioning of the same.
- Betweenbrain cramp: general rigidity of body muscles of an animal after superior resection of the betweenbrain.
- Blastophthoria: sterility (destruction of germ cell or embryo in consequence of the alcoholism of the progenitor).
- Blepharospasm: convulsive blinking.
- Camponotus ligniperdus: a large ant, making its nest in wood.
- Catalepsy: persistent rigidity of limbs.
- Catatonia: a subgroup of schizophrenia.
- Cathartic method: treatment by psychic purging.
- Causality, agglutinated: attribution of a phenomenon to whatever apparent causes.

- Cerebrospinal nervous system: see Animal nervous system.
- Chorea minor: St. Vitus's Dance.
- Chromaffin cells: cells of the adrenal cortex which are strongly positive to dyes.
- Cisterns: cavities in the pia mater at various points of the surface of the brain, filled with cerebrospinal fluid.
- Claustrophobia: dread of closed rooms and spaces.
- Colitis membranacea: inflammation of the large intestine with excretion of shreds of mucous membrane.
- Commotio cerebri: concussion of the brain.
- Compensation reflex: see text pp. 256, 264.
- Complexes: composite thought structures with special emotional tone.
- Constitution, ictafine: a constitution liable to fits or paroxysms.
- Conversion: a change or transformation of affect.
- Coprolalia: delight in obscene speech.
- Coprophilia: delight in excrement.
- Cyclothymia: a psychic disorder in which periods of extreme merriment alternate with periods of morbid depression.
- Dementia: imbecility.
- Diaschisis: functional failure of brain centers as a result of the breaking of their connections with other centers.
- Diencephalon: betweenbrain.
- Disjection: in dreams, the appearance of a person in duplicate.
- Dissimulation: concealment of a disorder.
- Dysphonia, mnemonic: disagreement between an external impression and a remembered impression.
- Dystrophia (adipose-genitalis): metabolic disorder due to injury to the anterior lobe of the pituitary, consisting in an enormous increase of fatty tissue and atrophy of the sex glands.
- Ecphoria: revival of a remembered impression.
- Ejaculatio praecox: premature discharge of semen.
- Ekkllis: aversion, disinclination, repugnance.
- Embiontic: acquired during life.
- Encephalitis lethargica: "sleepy sickness."
- Encephalosis, traumatic: physical and mental debility after severe injury to the brain.
- Endocrine glands: such glands as do not discharge their secretions outwardly, but into the blood vessels.
- Endogenous: from within: that is, produced by the body.
- Endotoxins: poisons produced in the body.
- Engram: an impression stored in the memory.
- Engraphy: the recording of impressions in the memory.
- Ependyma: a layer of cells lining the cerebral ventricles.
- Erotization: the rousing of the organism into a state of sexual desire.
- Erythrophobia: dread of blushing.
- Euphoria: state of ease and comfort.
- Exhibition: uncovering (exposing to view) the sexual organs.
- Exogenous: coming from without.
- Exotoxin: a poison of external origin.
- Extension reflex: a stretching reflex.

- Extrapyramidal system: the brain centers and nervous circuits which lie outside the pyramidal circuit and its centers.
- Fellatio: a perverse sexual action, the penis being taken into the mouth.
- Feminization: the changing of a male into a being that behaves like a female.
- Flexibilitas cerea: the waxlike pliancy of the limbs in states of catatonic mental derangement.
- Formica: a race of ants.
- Formica fusca: a brownish-black field ant.
- Formica rufa: the wood ant which builds ant hills.
- Formica sanguinea: a slave-holding wood ant.
- Frigidity: sexual coldness in women.
- Gene: a unit of inheritance.
- Gephyrophobia: dread of crossing bridges.
- Glia: (neuroglia) connective or supporting tissue of the brain.
- Globus hystericus: the hysterical sensation of having a lump in the gullet.
- Harmozone: hormone of development.
- Hemo-encephalic barrier: the wall or screen between the circulating blood and the cerebrospinal fluid.
- Heterosexuality: inclination toward the opposite sex.
- Homophony, mnemonic: harmony (similarity) between an external impression and the remembered impression.
- Homosexuality: inclination toward the same sex.
- Horme: the innate, inherited life and development programme of every living creature.
- Hormopathies: disorders of the instinctual life.
- Hyperdynamia: abnormal energy in respect of a person's age.
- Hyperkinesia: extremely convulsive or floundering, fidgety movements.
- Hypersecurity: an abnormal instinctive regard for safety.
- Hyperthyroidism: a state of excessive functioning of the thyroid gland.
- Hypnoid states: conditions of slight mental haziness, like the limited consciousness occurring in hypnosis.
- Hypochondria: morbid self-observation, due to fear that one is ill or in danger of illness.
- Hypophysis cerebri: the pituitary gland.
- Hypotension, psychological: diminished mental tension.
- Hypothalamus: the region of the brain beneath the optic thalamus.
- Idiosyncrasy: insuperable aversion to certain foods, etc.
- Imago: primal image (of the father or mother).
- Impotence: inability to perform the sexual act.
- Individuation: development of the "self."
- Infantilism: persistence in the infantile stage of development.
- Infantilism, psychosexual: persistence in the infantile stage of development in respect of the psychic irradiations of the sexual life.
- Inhibition, reciprocal: arrest of those groups of muscles which work against each other in the movements of walking.
- Integration: comprehension of partial functions in a total function.
- Introjection: psychic assimilation or appropriation.
- Introversion: withdrawal into the self.
- Ions: split molecules with opposite electrical charges.

- Kakonkrisis: an attack of anxiety.
- Klisis: propensity, inclination.
- Labile: wavering, changeable.
- Lability (of affects): emotional instability.
- Lasius fuliginosus: a glossy black ant making its nests in wood.
- Leptosome: a person of slender build.
- Leydig's cells: the interstitial cells of the testicles.
- Libido: sexual desire as a psychic impulse.
- Lomechusa: a species of beetle which lives as a guest in the nest of the slave-holding ant *Formica sanguinea*.
- Luschka's orifice: a lateral opening connecting the fourth cerebral ventricle on either side with the subarachnoidal space.
- Magendie's orifice: an opening in the roof of the fourth ventricle, through which the latter communicates with the subarachnoidal space.
- Masochism: taking delight in being tortured.
- Masturbation: see Onanism.
- Meningo-vasopathy: a chronic inflammation (not suppurative) of the meninges and the meningeal blood vessels.
- Metapsychology: the doctrine of instinctual processes beyond the psychic consciousness.
- Mneme: the memory of living substance.
- Mnemic experiment: an experiment devised to determine whether a reaction is innate or acquired through remembered impressions during life.
- Morbus sacer: epilepsy.
- Morphogenesis: the development of the outward form of an animal.
- Morphology: the science of external forms.
- Musculus dilatator pupillae: the muscle dilating the pupil of the eye.
- Musculus orbitalis: the muscle in the depth of the orbit which forces the eye forward.
- Musculus tarsalis superior and inferior: muscles of the eyelids.
- Mysophobia: dread of mice.
- Narcissism: love of self.
- Nautophobia: dread of boarding a ship or entering a boat.
- Neuropathology: the science of nervous diseases.
- Neuroplastic connective tissue: the cellular tissue between the sympathetic (parasympathetic) nerve endings and the cells of the various organs.
- Nucleus caudatus: a "tailed" nucleus, part of the neo-striatum in the brain.
- Onanism: sexual self-gratification.
- Ontogenesis: development of the germ to the completed creature.
- Orgasm: the culminating pleasure of sexual intercourse.
- Overdetermination (of a portion of a dream, of a symptom): when this is derived from several psychic contents.
- Palaeostriatum: the racially oldest part of the corpus striatum in the brain.
- Pallidum: the inner, fibrillous, whitish part of the lenticular nucleus in the mid-brain.
- Pansexualism: reference of all psychic processes to sexual causes.
- Paralysis agitans: a palsy resulting from disease of the extrapyramidal apparatus (Parkinson's Disease).
- Parapathy: neurosis.

- Paraphilia: perversity.
- Parapsychology: the doctrine that inanimate natural objects can be influenced by psychic processes.
- Parenchyma: the essential, functionally active tissue of an organ.
- Parkinsonism, postencephalitic: late sequel of sleepy sickness, resembling Parkinson's Disease.
- Partial instinct: part or component instinct.
- Pathogenesis: the origin of illness.
- Pathoneuroses: neuroses which develop after illnesses.
- Pavor nocturnus: night terrors of a child.
- Pederasty: sexual abuse of boys (homosexual intercourse through the anus).
- Pericellular spaces: serous crevices surrounding the nerve cells.
- Perivascular spaces: serous crevices surrounding the blood vessels in the brain.
- Periventricular: nerve tissue surrounding the ventricles.
- Phagocytes: the scavenging cells of the blood.
- Phallus: symbol of the male organ.
- Phobia: morbid dread of something.
- Phylogenesis: the history of the race.
- Physiopathic disturbances: nervous disorders in particular regions of the limbs, especially in the hands, which are not hysterical but are physically conditioned.
- Pithiatism: see text pp. 16, 132.
- Plexus choreoidei: the villous reticulum of the ventricles.
- Pollakisuria: frequent need to urinate.
- Polyergus rufescens: slave raiding Amazonian ants.
- Polypragmasia: extreme business.
- Pregenital zones: regions of the body whose pleasurable toning precedes the pleasurable toning of the sexual organs.
- Progressive paralysis: progressive disease of the brain as a late sequel of syphilis.
- Protodiakrisis: first differentiation of stimuli in respect of their significance.
- Protozoa: one-celled primitive animals.
- Pruritus ani: itching of the anus.
- Pseudologia phantastica: a morbid love of lying.
- Psychagogics: psychic or spiritual guidance.
- Psychasthenia: a condition verging on mental exhaustion.
- Psychogenesis: the occurrence of an illness through psychic causes.
- Psychogenous: evoked by psychic happenings.
- Psychoid: the unconscious soul of cells and organs.
- Psychopathology: the science of psychic maladies.
- Psychopathy: innate psychic abnormality.
- Psycho-reflex: conditioned reflex: see pp. 105 et seq.
- Psychosis: mental illness.
- Pubertas praecox: abnormally precocious puberty.
- Puberty glands (male and female): the interstitial substance of the sex glands, whose increasing amount and activity generates sexual desire.
- Putamen: the outer portion of the lenticular nucleus in the midbrain.
- Pycnic (pycnic constitution): an innate tendency to adiposity and the characteristic psychic behavior.
- Rationalization: the subsequent finding of reasons for instinctual reactions.

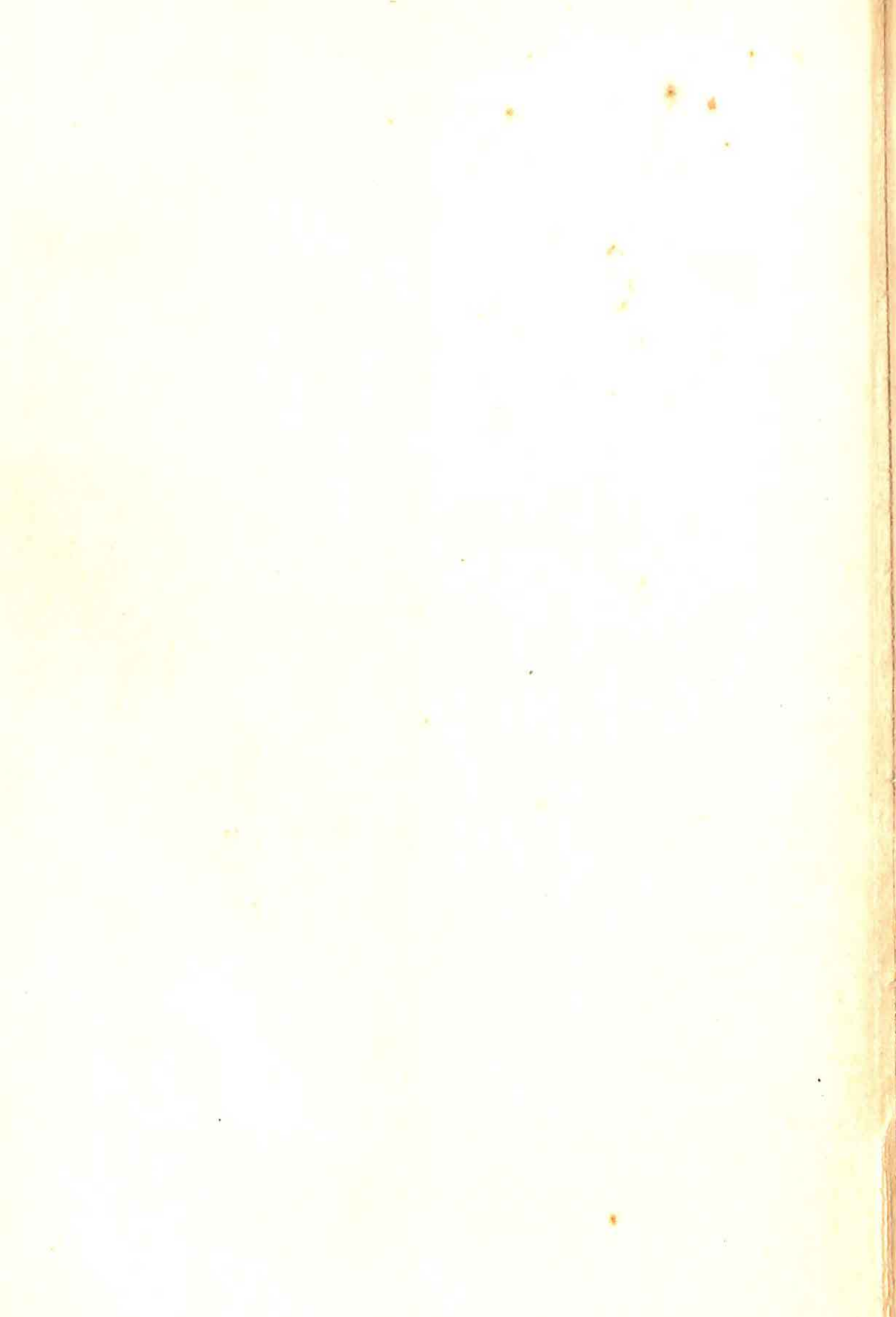
- Reflexes: involuntary movements.
- Reflexology: the doctrine or science of reflexes.
- Regression: going back to an earlier type of behavior.
- Representation: representative—representing an instinct in the consciousness.
- Sadism: delight in inflicting suffering.
- Schizophrenia: a form of insanity in which the mind is "split."
- Scotomization: reluctance to see an object.
- Sinuses, venous: indentations in the skull containing the veins that remove the blood from the brain.
- Somatogenous: of bodily origin.
- Stigma: a characteristic mark or symptom.
- Stigmatization: a characteristic marking.
- Structural automatism: an involuntary activity prefigured in the arrangement of the nervous system.
- Subarachnoidal space: the space between the surface of the brain and the pia mater.
- Sympathicotony: state of increased tension in the sympathetic nervous system.
- Tabophobia: dread of developing spinal disease.
- Tela choreoidea: fine sheets of vascular membrane in the walls of the ventricles.
- Tetany: cramps of a peculiar nature occurring in disease of the parathyroids.
- Thalamus, optical: a large mass of ganglia in the midbrain.
- Thanatophobia: fear of death.
- Therapy: treatment.
- Thymopathy: a psychic malady.
- Thymus gland: a gland beneath the breastbone, which in childhood makes blood.
- Tic: nervous muscular twitching.
- Torsion spasm: convulsive twisting of the musculature of the trunk.
- Torticollis: wry neck.
- Totemic animals: animals of which savages believe that they are the ancestors of their tribe.
- Toxins: poisonous substances.
- Trauma: a wound.
- Trophic: relating to the nourishment of the tissues.
- Tropism: involuntary movements of animals or plants toward or in respect of external sources of stimulation.
- Urethral eroticism: finding pleasure in procedures connected with urination.
- Vagotomy: a state of increased tension in the system of the vagus nerve.
- Ventricle: a cavity (usually in the brain).
- Verbigeration: a "mayonnaise" or "mish-mash" of words.
- Vitamins: substances essential to life, which are effective in the minutest quantities, but whose absence gives rise to serious deficiency diseases.
- Voyeurs: persons who attempt to observe the sexual activities of others.
- Yoga: an esoteric Indian science which is alleged to endow the practitioner with supernatural psychic powers.

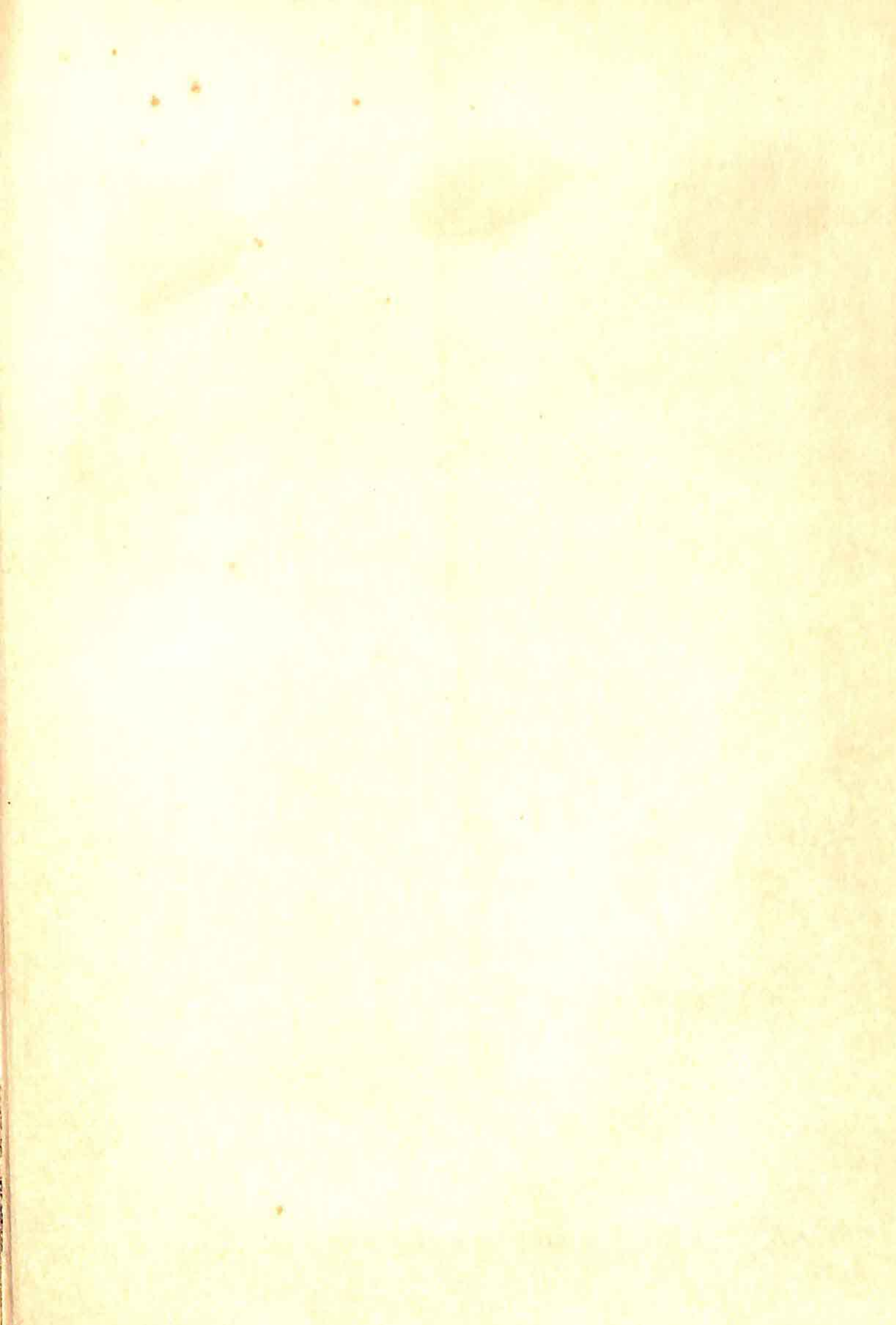
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